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ARTHROPOD-BORNE ENCEPHALITIS  
A bibliography, covering literature of 1953 through 1958

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE  
Public Health Service  
Washington, D. C.  
May 1959

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A bibliography, covering literature of 1953 through 1958  
Compiled by  
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Medical Officer

**U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE**  
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## INTRODUCTION

This is another in the National Library of Medicine's series of bibliographies on selected subjects of current interest. Recent advances in methods for isolation and rapid identification of arthropod-borne encephalitis viruses have led to an increase in the number of laboratories available for assistance in stemming epidemics caused by these viruses. This is a valuable aid since the speed and frequency of international travel have heightened the chances of a local epidemic becoming widespread. The references selected for this bibliography are in English, French, German, Italian and Spanish; the period covered is 1953-1958. Russian and Middle European literature is included only as it appears in English in - *Acta virologica*, English edition, Praha; *Problems of virology*; *Journal of hygiene, epidemiology, microbiology and immunology*, Praha; *Rumanian medical review*; *Bulletin of World Health Organization*, and other journals.

There are two main sections: I. Books devoted to, or containing authoritative material on, arthropod-borne encephalitis. II. Articles; these are listed under the particular geographic regions in which the



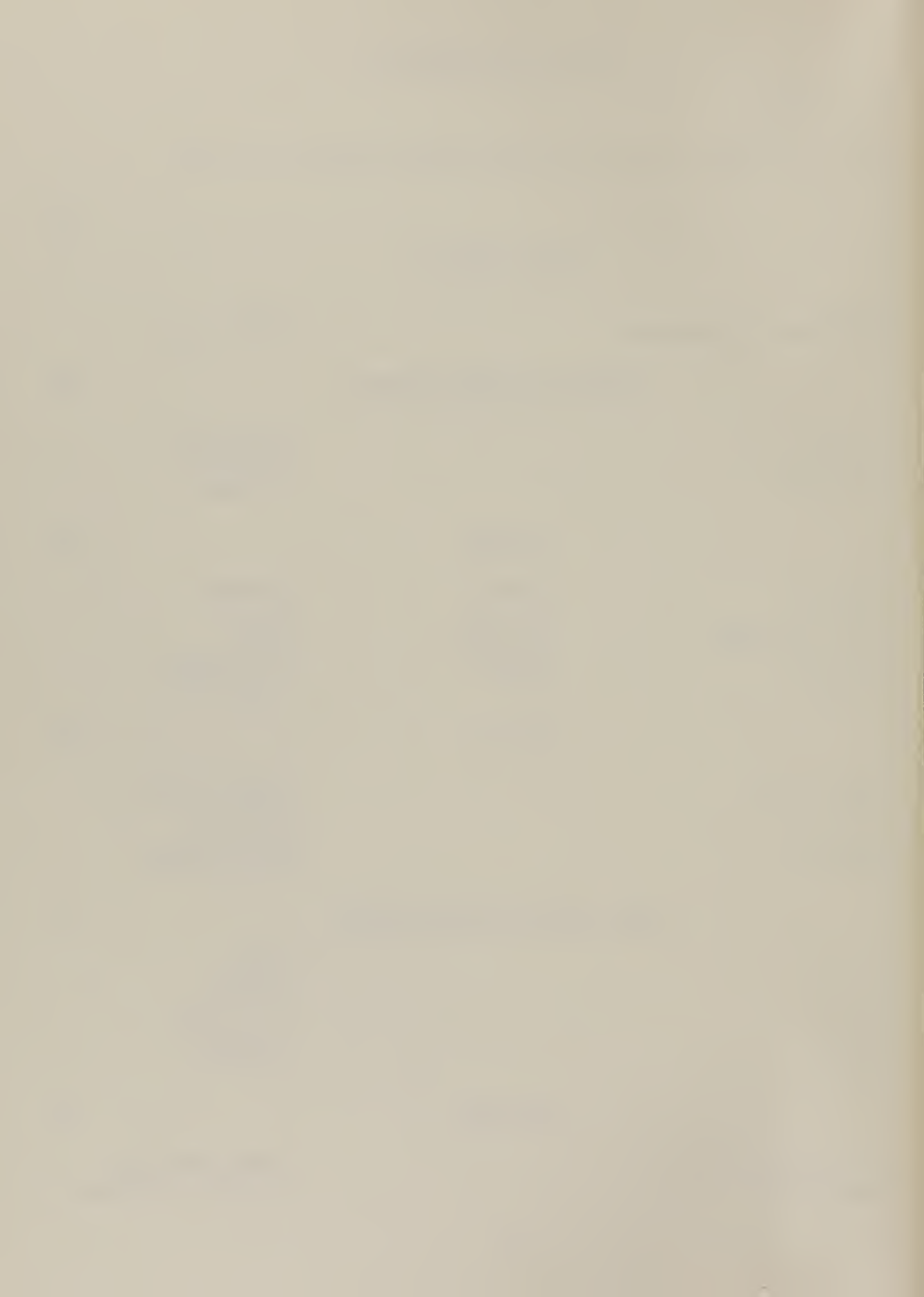


various studies were made. The sources searched were, Current List of Medical Literature; Bibliography of Medical Reviews; the card catalogs of the National Library of Medicine; Quarterly Cumulative Index Medicus; Excerpta Medica, Sections, 6, 7, 8 and 17; Advances in Virus Research; Annual Review of Microbiology; Bacteriological Reviews; Bulletin of Hygiene; Bulletin de l'Institut Pasteur; Index Veterinarius; Problems of Virology; the Agricultural Index; Tropical Diseases Bulletin; Virology.



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Abbreviations for diseases used in the bibliography;

EEE,	eastern equine encephalitis
JBE,	Japanese B encephalitis
MVE,	Murray Valley encephalitis
RSSE,	Russian spring summer encephalitis
SLE,	St. Louis encephalitis
VEE,	Venezuelan equine encephalitis
WEE,	western equine encephalitis
WN,	occasionally used for West Nile fever

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## I. BOOKS

1. Alpers, B. J. Clinical neurology. 4th ed. Philadelphia, Davis, 1958. 890 p. Encephalitis, p. 397-409. Table 36, features of acute epidemic encephalitis, p. 414. Equine encephalomyelitis, p. 419-420.
2. American Public Health Association. Diagnostic procedures for virus and rickettsial diseases. 2nd ed. New York, American Public Health Association, 1956. 578 p.  
Hammon, W. McD. Encephalitis (Arthropod-borne virus encephalitis and lymphocytic choriomeningitis), p. 169-206. 85 references. Included are WEE, EEE, VEE, SLE, JBE, MVE, RSSE louping ill, and West Nile fever.
3. American Public Health Association. Control of communicable diseases in man. New York, American Public Health Association, 1955. 219 p. Encephalitis; arthropod-borne virus, p. 62-64. A pithy summary covering epidemiology, source and reservoirs of infection, mode of transmission, incubation period, period of communicability, and epidemic control measures.
4. Bedson, S. P., Downie, A. W., MacCollum, F. O. and Stuart-Harris, C. H. Virus and rickettsial diseases. 2nd ed. London, Arnold, 1955. 407 p. Included are WEE, EEE, SLE, VEE, JBE, RSSE, MVE, louping ill, and West Nile fever, p. 305-321.
5. Berger, E. and Melnick, J. L. eds. Progress in medical virology. Vol. 1. New York, Hafner, 1958. 304 p.  
Smorodintsev, A. A. Tick-borne spring-summer encephalitis, p. 210-247.  
Work, T. H. Russian spring-summer virus in India: Kyasanur Forest disease, p. 248-279.

6. Bieling, R. Viruskrankheiten. 1. Teil. Die Viruskrankheiten des Menschen. 4th ed. Leipzig, Barth, 1954. 166 p. Encephalomyelitiden; Panencephalitis (St. Louis Encephalitis, Encephalitis B und Zeckenencephalitis), p. 81-87.
7. Bingel, K. F. Die experimentelle Virusdesinfektion; Ergebnisse und Methoden. Leipzig, Barth, 1957. 83 p. 429 references. Tables containing data on arthropod-borne encephalitis are, table 3, p. 6; table 6, p. 11; table 10, p. 20; table 12, p. 26; table 18, p. 37 and p. 38.
8. Dragunas, V. Die physikalischen und chemischen Eigenschaften der menschenpathogenen Viren. Frankfurt a. M., 1956. (Inaug.-Diss. -Frankfurt). 124 p. 286 references. Methods, p. 4-10. Virus diseases of the nervous system, p. 61-82.
9. Ferguson, F. F. Biological factors in the transmission of American arthropod-borne virus encephalitides; a summary. U. S. Public Health Service, Public health monograph no. 23. (P.H.S. publication no. 372) 1954. 37 p. 433 references. Review of first 20 years of recognition of the neurotropic viruses, WEE, EEE, VEE, Ilhéus.
10. Fields, W. S. and Blattner, R. J., eds. Viral encephalitis. A symposium: Fifth Annual Scientific Meeting of the Houston Neurological Society, Texas Medical Center, Houston, Texas, 1957. Springfield, Ill., Thomas, 1958. 225 p.
  - Casals, J. Viral encephalitis, p. 5-21.
  - Lennette, E. H. Arthropod-borne viral encephalitis, p. 22-45.
  - Finley, K. H. Postencephalitis manifestations of viral encephalitides, p. 69-94.
11. Freymann, R. Die Virusencephalitiden in der Sowjetunion und Mitteleuropa. Berlin, 1957. (Diss. -Freie Univ. -Berlin). 92 p. 112 references.

12. Germer, W. D. Viruserkrankungen des Menschen. Ein Lehrbuch der Klinik; Epidemiologie und Ätiologie der menschlichen Viroten. Stuttgart, Thieme, 1954. 190 p.  
Arthropod-borne virus encephalitis, p. 127-130. A concise review of EEE, WEE, VEE, JBE, MVE, RSSE, louping ill, and West Nile fever.
13. Hull, T. G. Diseases transmitted from animals to man. 4th ed. Springfield, Ill., Thomas, 1955. 717 p.  
Arthropod-borne viral encephalitides, p. 381-400. 118 references arranged under following headings; General; Western equine; Eastern equine; Venezuelan; St. Louis; Japanese B; California; Russian spring-summer; Louping ill; Murray Valley.
14. Kalter, S. S. and Prier, J. E. A manual of medical virology. Minneapolis, Minn., Burgess, 1955. 127 p.  
Laboratory technic. p. 97-102. Included are, WEE, EEE, SLE, VEE, JBE, "Russian far east encephalitis", louping ill and West Nile fever.
15. Krugman, S. and Ward, R. Infectious diseases of children. St. Louis, Mosby, 1958. 340 p. Summer arthropod-borne encephalitis, p. 62-68. Included is a concise presentation of control measures.
16. Mackie, T. T., Hunter, G. W. III, and Worth, C. B. A manual of tropical medicine. Philadelphia, Saunders, 1954. 907 p. Introduction, p. 1-4 describes locations in which specific virus diseases are found. Arthropod-borne encephalitis, p. 37-42. Included are, distribution, etiology, epidemiology and prophylaxis of SLE, WEE, EEE, "California encephalitis", VEE, JBE, RSSE, and louping ill.
17. Maxcy, K. F. Rosenau preventive medicine and public health. 8th ed. New York, Appleton, 1956. 1465 p.  
The arthropod-borne encephalitides, p. 375-385. 31 references (1935-1956).



18. Paul, J. R. Clinical epidemiology. Chicago, University of Chicago Press, 1958. 291 p. Arthropod-borne virus infections, p. 240-254. Group A; EEE, WEE, VEE. Group B; SLE, JBE, MVE, RSSE, West Nile fever.
19. Quersin-Thiry, L. Action de sérums antitissulaires sur certaines infections à virus. Bruxelles, Editions Acta medica belgica, 1955. 99 p. (Revue belge de pathologie et de médecine expérimentale. Supplement 10) Protection of mouse against certain neurotropic virus infections with the aid of serum antibodies, p. 45-73.
20. Rhodes, A. J. and Rooyen, C. E. van. Textbook of virology for students and practitioners of medicine. 3rd ed. Baltimore, Williams and Wilkins, 1958. 642 p.
  - North American equine encephalitis, eastern and western type, p. 509-520.
  - St. Louis encephalitis, p. 520-523.
  - Venezuelan equine encephalitis, p. 523-525.
  - Australian epidemic encephalitis, p. 525-532.
  - Japanese B encephalitis, p. 532-537.
  - Tick-borne encephalitis in Russia and Europe, p. 538-542.
21. Rivers, T. M. and Horsfall, F. L., Jr. Viral and rickettsial infections of man. 3rd ed. Philadelphia, Lippincott, 1959. 967 p.
  - Casals, J. and Reeves, W. C. Arthropod-borne animal viruses, p. 269-285.
  - Olitsky, P. K. and Casals, J. Arthropod-borne Group A virus infections in man, p. 286-304.
  - Olitsky, P. K. and Clarke, D. H. Arthropod-borne Group B infections in man, p. 305-342.
22. Smith, D. T., Conant, N. F., Beard, J. W., Willett, H. P., Overman, J. R., Brown, I. W., Sharp, D. J. and Poston, M. A. Zinsser bacteriology. 11th ed. New York, Appleton, 1957. Arthropod-borne virus diseases of man (Arbor viruses), p. 771-789. 216 references.

## II. ARTICLES

### NORTH AMERICA

23. Alexander, E. R. and Murray, W. A., Jr. Arthropod-borne encephalitis in 1956. Pub. Health Rep., 1958, 73: 329-339. Increased incidence of the arthropod-borne encephalitides in 1956; EEE, WEE, SLE.
24. Bailey, P. Czechoslovakian tick encephalitis. Neurology, 1958, 8: 890-896. Review of literature.
25. Baker, A. B., Haymaker, W. and Finley, K. H. Western equine encephalitis. Neurology, 1958, 8: 880-882. Clinical features, pathology and sequelae.
26. Bang, F. B., Gey, G. O., Foard, M. and Minnegan, D. Chronic equine encephalomyelitis. Virology, 1957, 4: 404-417.
27. Banta, J. E. The diagnosis of viral encephalomyelitis. U. S. Armed Forces M. J., 1958, 19: 1280-1285. Studies on 29 types of viruses.
28. Banta, J. E., Jones, W. L. and Reber, L. J. Cultivation of dengue, western equine encephalomyelitis, Japanese encephalitis and West Nile viruses in selected mammalian cell cultures. Am. J. Hyg., 1958, 67: 286-299.
29. Banta, J. E. Cultivation of dengue, western equine encephalomyelitis, Japanese encephalitis, and West Nile viruses in selected mammalian cell cultures. p. 937-950. Research Report N. M. 5205 00.01.01 23 Dec. 1957. Naval Medical Research Institute, Bethesda, Md.
30. Barnett, H. C. Experimental studies of concurrent infection of canaries, and of the mosquito *Culex tarsalis* with *Plasmodium relictum*, and western equine encephalitis virus. Am. J. Trop. M. Hyg., 1956, 5: 99-109.

31. Barnett, H. C. The transmission of western equine encephalitis virus by the mosquito *Culex tarsalis* Coq. *Am. J. Trop. M. Hyg.*, 1956, 6: 86-93.
32. Beadle, L. D., Menzies, G. C., Hayes, G. R., Jr., Von Zuben, F. L., Jr., and Eads, R. B. St. Louis encephalitis in Hidalgo County, Texas. Vector evaluation and control. *Pub. Health Rep.*, 1957, 72: 531-535.
33. Bernet, C. P., La Veck, G. D., and Winn, J. F. Absence of neutralizing antibodies against western equine encephalomyelitis in sera of children with epilepsy. *J. Immun.*, 1955, 75: 330-331. Study of 28 epileptic children.
34. Blackmore, J. S. and Winn, J. F. A winter isolation of western equine encephalitis virus from hibernating *Culex tarsalis*. Coquillitt. *Proc. Soc. Exp. Biol.*, N. Y., 1956, 91: 146-148.
35. ----- and Winn, J. F. *Aedes migromaculis* (Ludlow), mosquito naturally infected with western equine encephalomyelitis virus. *Proc. Soc. Exp. Biol.*, N. Y., 1954, 87: 328-329.
36. Bourne, H. Does virus encephalitis cause mental defect? *Am. J. Ment. Defic.*, 1956, 61: 198-203.
37. Broun, G. G., Haymaker, W., and Smith, J. E. St. Louis encephalitis. *Neurology*, 1958, 8: 883-887. Clinical features, pathology, and sequelae.
38. Brown, L. V. Studies on western equine encephalomyelitis virus in tissue cultures. I. The color change of phenol red in cultures of chick embryo tissue as a visible method for assay of western equine encephalomyelitis virus and its antibody. *Am J. Hyg.*, 1958, 67: 214-236. The serum of 48 humans and 23 animals tested.
39. Bruyn, H. B. and Lennette, E. H. Western encephalitis in infants, 3 cases with sequels. *California M.*, 1953, 79: 362-366.



40. Bucca, M. A. The effect of various chemical agents on eastern equine encephalomyelitis virus. *J. Bact., Balt.*, 1956, 71: 491-492.
41. Buescher, E. L. Arthropod-borne encephalitides in Japan and southeast Asia. *Am. J. Pub. Health*, 1956, 46: 597-600.
42. Burns, K. F. and Faruniaci, C. J. Virus of bats antigenically related to St. Louis encephalitis. *Science*, 1956, 123: 227.
43. Casals, J. The arthropod-borne group of animal viruses. *Tr. N. York Acad. Sc.*, 1957 Ser. 2, 19: 219-235.  
Class A; EEE, WEE, VEE: Class B; JBE, SLE, MVE, RSSE, West Nile, louping ill, Ilhéus.
44. ----- and Brown, L. V. Hemagglutination with arthropod-borne viruses. *J. Exp. M.*, 1954, 99: 429-449.
45. ----- and Brown, L. V. Hemagglutination with certain arthropod-borne viruses. *Proc. Soc. Exp. Biol., N. Y.*, 1953, 83: 170-173.
46. Chamberlain, R. W. Vector relationships of the arthropod-borne encephalitides in North America. *Ann. N. York Acad. Sc.*, 1958, 70: 312-319. 41 references.
47. ----- and Sudio, W. D. Dual infections of eastern and western equine encephalitis viruses in *Culex tarsalis*. *J. Infect. Dis.*, 1957, 101: 233-236.
48. ----- and Sudio, W. D. The North American arthropod-borne encephalitis viruses in *Culex tarsalis* Coquillett. *Am. J. Hyg.*, 1957, 66: 151-159.
49. ----- Kissling, R. E., Stamm, D. D., and Sudio, W. D. Virus of St. Louis encephalitis in three species of wild birds. *Am. J. Hyg.*, 1957, 65: 110-118. Transmission cycle; chicken, *Culex tarsalis*, wild birds and chickens.

50. Chamberlain, R. W., Sikes, R. K., and Nelson, D. B. Infection of *Mansonia perturbans* and *Psorophora ferox* mosquitoes with Venezuelan equine encephalomyelitis virus. *Proc. Soc. Exp. Biol.*, N. Y., 1956, 91: 215-216.
51. ----- and Sudio, W. D. The effects of temperature upon the extrinsic incubation of eastern equine encephalitis in mosquitoes. *Am. J. Hyg.*, 1955, 62: 295-305.
52. ----- and Sikes, R. K. Laboratory investigations on the role of bird mites in the transmission of eastern and western encephalitis. *Am. J. Trop. M. Hyg.*, 1955, 4: 106-118.
53. ----- Sikes, R. K., and Kissling, R. E. Use of chicks in eastern western equine encephalitis studies. *J. Immun.*, 1954, 73: 106-114.
54. ----- Corristan, E. C., and Sikes, R. K. Studies on North American arthropod-borne encephalitides. V. The extrinsic incubation of eastern and western equine encephalitis in mosquitoes. *Am. J. Hyg.*, 1954, 60: 269-277.
55. ----- Sikes, R. K., Nelson, D. B., and Sudio, W. D. Studies on the North American arthropod-borne encephalitides. VI. Quantitative determinations of virus-vector relationships. *Am. J. Hyg.*, 1954, 60: 278-285.
56. ----- Kissling, R. E., and Sikes, R. K. Studies on the North American arthropod-borne encephalitides. VII. Estimation of amount of eastern equine encephalitis virus inoculated by infected *Aedes aegypti*. *Am. J. Hyg.*, 1954, 60: 286-291.
57. Chambers, V. C. The prolonged persistence of western equine encephalomyelitis virus in cultures of strain L cells. *Virology*, 1957, 3: 62-75.
58. ----- and Evans, C. A. Some observations on the growth of western equine encephalomyelitis virus in cultures of L cells. *Bact. Proc.*, 1953, 42: (abst.).

59. Chanock, R. M. and Sabin, R. M. The hemagglutinin of western equine encephalitis virus; recovery, properties and use in diagnosis. *J. Immun.*, 1954, 73: 337-351.
60. ----- and Sabin, A. B. The hemagglutinin of West Nile virus; recovery, properties and antigenic relationships. *J. Immun.*, 1954, 74: 352-362.
61. ----- and Sabin, A. B. The hemagglutinin of St. Louis encephalitis virus. I. Recovery of stable hemagglutinin from the brains of infected mice. *J. Immun.*, 1953, 70: 271-286.
62. ----- and Sabin, A. B. The hemagglutinin of St. Louis encephalitis virus. II. Physico-chemical properties and nature of its reaction with erythrocytes. *J. Immun.*, 1953, 70: 286-301.
63. ----- and Sabin, A. B. The hemagglutinin of St. Louis encephalitis virus. I. Properties of normal inhibitors and specific antibody; use of hemagglutination inhibition for diagnosis of infection. *J. Immun.*, 1953, 70: 286-301.
64. Cheever, F. S. and Smith, L. W. Multiplication of St. Louis encephalitis virus in mice exposed to Roentgen radiation. *Laborat. Invest.*, 1956, 5: 44-52.
65. ----- and Deckos, J. Propagation of St. Louis encephalitis virus in cells of the Ehrlich ascitic tumor of mice. *Proc. Soc. Exp. Biol.*, N. Y., 1953, 83: 822-825.
66. Cheng, P. Y. The inactivation of Group B arthropod-borne animal viruses by proteases. *Virology*, 1958, 1: 129-136.
67. Chin, T. D. W., Heimlich, C. R., White, R. E., Mason, D. M., and Furcolow, M. E. St. Louis encephalitis in Hidalgo County, Texas; epidemiological features. *Pub. Health Rep.*, 1957, 72: 512-518.



68. Clarke, D. H. and Casals, J. Techniques for hemagglutination and hemagglutination-inhibition with arthropod-borne viruses. *Am. J. Trop. M. Hyg.*, 1958, 7: 561-573. 17 references. Exhaustive description of laboratory methods.
69. ----- Improved methods for hemagglutination studies with arthropod-borne viruses. *Proc. Soc. Exp. Biol.*, N. Y., 1955, 88: 96-99.
70. Cockburn, T. A., Sooter, C. A., and Langmuir, A. D. Ecology of western equine and St. Louis encephalitis viruses; a summary of field investigations in Weld County, Colorado, 1949 to 1953. *Am. J. Hyg.*, 1957, 65: 130-146.
71. Cohen, R., O'Connor, R. E., Townsend, T. E., Webb, P. A., and McKey, R. W. Western equine encephalomyelitis; clinical observations in infants and children. *J. Pediat.*, St. Louis, 1953, 43: 26-34. 42 cases.
72. Dardiri, A. H., Yates, V. J., Chang, P. W., and Wheatley, G. H. The isolation of eastern equine encephalomyelitis virus from brains of sparrows. *J. Am. Vet. M. Ass.*, 1957, 130: 409-410. "This believed to be the first report of the isolation of EEE from naturally infected sparrows."
73. De Boer, C. J., Cadilek, A. E., and Walters, S. R. The use of hyperimmune antiserum concentrates in experimental western equine encephalomyelitis. *J. Immun.*, 1955, 75: 308-313.
74. Dent, J. H. Pathological changes in the brains of children infected with the virus of eastern equine encephalomyelitis. *Bull. Tulane M. Fac.*, 1955, 14: 85-95. 9 cases.
75. Diercks, F. H. and Hammon, W. McD. Hamster kidney cell tissue cultures in propagation of Japanese B encephalitis virus. *Proc. Soc. Exp. Biol.*, N. Y., 1958, 97: 627-632.

76. Donaldson, A. W. Arthropod-borne encephalitis in the U. S. A. Am. J. Pub. Health, 1958, 43: 1307-1314. WEE, EEE and SLE of primary importance.
77. Dulbecco, R., Vogt, M., and Strickland, A. G. R. A study of the basic aspects of neutralization of two animal viruses, western equine encephalitis virus and poliomyelitis virus. Virology, 1956, 2: 162-205.
78. ----- and Vogt, M. One-step growth curve of western equine encephalomyelitis virus on chicken embryo cells grown in vitro and analysis of virus yields from single cells. J. Exp. M., 1954, 99: 183-199.
79. Eklund, C. Colorado tick fever. Neurology, 1958, 8: 889. Clinical features, pathologic studies. Presented at the Conference on Sequelae of the Arthropod-borne Encephalitides, held at Bethesda, Md., October 16-17, 1957.
80. ----- Kohls, G. M., and Jellison, W. L. Isolation of Colorado tick fever virus from rodents in Colorado. Science, 1958, 128: 413.
81. ----- Kohls, G. M., and Brennan, J. M. Distribution of Colorado tick fever and virus-carrying ticks. J. Am. M. Ass., 1955, 157: 335-337. 193 cases discovered in 9 states. Virus isolated from the blood of 5 children who had evidence of C.N.S. pathology.
82. ----- Mosquito transmitted encephalitis viruses; a review of their insect and vertebrate hosts and the mechanisms for survival and dispersion. Exper. Parasit., N. Y., 1954, 3: 285-305. WEE, EEE, SLE, VEE, JBE, MVE.
83. Ellwood, P. M. Continuation studies; infectious and postinfectious encephalitis. Minnesota M., 1956, 39: 169-172. WEE and SLE, p. 170.
84. Equine encephalomyelitis in 1956. J. Am. Vet. M. Ass., 1957, 130: 509-510. Statistical survey of EEE, WEE, and SLE in U. S.



85. Feemster, R. F., Wheeler, R. E., Daniels, J. B., Rose, H. D., Schaeffer, M., Kissling, R. E., Hayes, R. O., Alexander, E. R., and Murray, W. A. Field and laboratory studies on encephalitis. N. England J. M., 1958, 259: 107-113. 18 references. South-eastern Massachusetts, 1953-1957.
86. ----- and Haymaker, W. Eastern equine encephalitis. Neurology, 1958, 8: 882-883. Clinical features, pathology and sequelae.
87. ----- Equine encephalitis in Massachusetts. N. England J. M., 1957, 257: 701-704. 50 cases.
88. Ferguson, F. F. Biological factors in the transmission of American arthropod-borne virus encephalitides. A summary. U. S. Department of Health Education and Welfare, Public Health Service. 1954. Monograph no. 23., Public Health Service Publication no. 372. 37 p. Table No. 7, p. 17-19 summarizes historical highlights.
89. Finley, K. H., Longshore, W. A., Palmer, R. J., Cook, R. E., and Riggs, N. Western equine and St. Louis encephalitis. Preliminary report of a clinical follow-up study in California. Neurology, 1955, 5: 223-235. 447 cases.
90. ----- and Chapman, W. M. The 1952 outbreak of encephalitis in California. Long-term neurologic and psychiatric studies of sequelae. California M., 1953, 79: 94-96.
91. ----- Kokernot, R. H. and Lennette, E. H. A preliminary nine months follow-up of over two hundred and fifty cases of western equine and St. Louis encephalomyelitis from a 1952 summer epidemic. Tr. Am. Neur. Ass., 1953, p. 22-25.
92. Fox, I. Ornithonyssus bursa (Berlese) attacking man in Puerto Rico. J. Econom. Entom., 1957, 50: 838. "Bird mites have been implicated in the transmission of arthropod-borne encephalitis."
93. Fulton, J. S. and Burton, A. N. After effects of western equine encephalomyelitis infection in man. Canad. M. Ass. J., 1953, 69: 268-272. After apparent recovery C.N.S. symptoms may occur.



94. Gajdusek, D. C., Anslow, R. O., Hubbell, E. J., and Yager, R. H. Tissue culture studies of Venezuelan equine encephalomyelitis virus. I. Propagation in human uterine tissue. *J. Immun.*, 1954, 72: 224-228.
95. Goldfield, M. Virus meningitis. *Am. J. Med. Sc.*, 1957, 234: 91-103. 114 references. Review of literature; arthropod-borne encephalitis, p. 102.
96. Gordon, F. B. and Capps, W. I. Growth of West Nile virus in tissue cultures. *Fed. Proc.*, Balt., 1957, 16: 1531. (Abst.)
97. Grundmann, A. W. and Leymaster, G. R. Equine encephalomyelitis in Utah. A survey of horses and man utilizing serum-neutralization tests. *J. Am. Vet. M. Ass.*, 1954, 124: 40-42.
98. Guerra-Chabau, A., Prendes, Z., and Valledor, P. Fijación de complemento en encefalitis equina humana. *Rev. cubana lab. clin.*, 1954, 8: 68-73.
99. Hadlow, W. J. Histopathologic changes in suckling mice infected with the virus of Colorado tick fever. *J. Infect. Dis.*, 1957, 101: 158-167. C.N.S. lesions similar to those found in SLE.
100. Halverson, W. L., Longshore, W. A. Jr., and Peters, R. F. The 1952 encephalitis outbreak in California. *Pub. Health Rep.*, 1953, 68: 369-377. Clinical and epidemiological studies.
101. Hamilton, P. K. and Taylor, R. M. Report of clinical case of West Nile virus infection probably acquired in the laboratory. *Am. J. Trop. M. Hyg.*, 1954, 3: 51-53.
102. Hammon, W. McD. The viral encephalitides; introduction. *Ann. N. York Acad. Sc.*, 1958, 70: 292-293.
103. ----- Sather, G. E., Lennette, E. H., and Reeves, W. C. Serological response to Japanese B encephalitis vaccine of children and horses immune to St. Louis virus. *Proc. Soc. Exp. Biol.*, N. Y., 1956, 91: 517-521.

104. Hanson, R. P. An epizootic of equine encephalomyelitis that occurred in Massachusetts in 1831. *Am. J. Trop. M. Hyg.*, 1957, 6: 858-862. "The disease described in 1831 fits modern descriptions of eastern equine encephalomyelitis." The article quotes from this report.
105. Hanson, R. P., Scott, G. R., Ferris, D., and Upton, E. Eastern equine encephalomyelitis in Wisconsin. *Am. J. Trop. M. Hyg.*, 1954, 3: 54-56.
106. Harmston, F. C., Schultz, G. R., Eads, R. B., and Menzies, G. C. Mosquitoes and encephalitis in the irrigated high plains of Texas. *Pub. Health Rep.*, 1956, 71: 759-766.
107. Haymaker, W., Sather, G. E., and Hammon, W. McD. Accidental Russian spring-summer viral encephalitis. (Cases occurring in two laboratory workers, one fatal with postmortem study.) *A. M. A. Arch. Neur. Psychiat.*, 1955, 73: 609-630.
108. Herzon, H., Shelton, J. T., and Bruyn, H. B. Sequelae of western equine and other arthropod-borne encephalitides. *Neurology*, 1957, 7: 535-548. 52 references. Review of literature.
109. Hess, A. D. and Holden, P. The natural history of the arthropod-borne encephalitides in the United States. *Ann. N. York Acad. Sc.*, 1958, 70: 294-311. 60 references.
110. Hoder, H. L. Encephalitides and postinfectious encephalopathies. *Proc. Ass. Res. Nerv. Ment. Dis.*, 1954, 34: 44-55. "3 related viruses have caused primary encephalites in children as well as adults."
111. Holden, P. Transmission of eastern equine encephalomyelitis in ring-necked pheasants. *Proc. Soc. Exp. Biol., N. Y.*, 1955, 88: 607-610.
112. ----- Recovery of western equine encephalomyelitis virus from naturally infected English sparrows of New Jersey. *Proc. Soc. Exp. Biol., N. Y.*, 1955, 88: 490-492.

113. Holden, P., Miller, B. J., and Jobbins, D. M. Isolation of eastern equine encephalomyelitis virus from mosquitoes (*Culiseta melanura*) collected in New Jersey, 1953. *Proc. Soc. Exp. Biol., N. Y.*, 1954, 87: 457-459.
114. Hollister, A. C. Jr., Longshore, W. A., and Dean, B. H. The 1952 outbreak of encephalitis in California. *Epidemiologic aspects. California M.*, 1953, 79: 84-90.
115. Ichelson, D. L. Meningoencephalitis and pneumonitis due to western equine virus. *California M.*, 1956, 84: 413-419. 20 cases.
116. Imam, I. Z. and Hammon, W. McD. Challenge of hamsters with Japanese B, St. Louis and Murray Valley encephalitis viruses after immunization by West Nile infection plus specific vaccine. *J. Immun.*, 1957, 79: 243-252.
117. ----- Challenge of monkeys with Japanese B virus after immunization by West Nile infection plus Japanese B vaccine. *J. Immun.*, 1957, 79: 253-258.
118. ----- Immunologic response and pathogenesis of Japanese B infection in peripherally inoculated normal and cortisone treated hamsters. *Proc. Soc. Exp. Biol., N. Y.*, 1957, 95: 12-16.
119. ----- Attempts to immunize hamsters to West Nile virus; passive, passive-active and active methods. *Proc. Soc. Exp. Biol., N. Y.*, 1957, 95: 17-24.
120. Jervis, G. A. and Higgins, G. H. Russian spring-summer encephalitis; clinico-pathologic report of a case in the human. *J. Neuropath.*, 1953, 12: 1-10. Laboratory worker.
121. Jungherr, E. L. and Wallis, R. C. Investigation of eastern equine encephalomyelitis. I. General aspects. *Am. J. Hyg.*, 1958, 67: 1-3.



122. Jungherr, E. L., Helmboldt, C. F., Satriano, S. F., and Luginbuhl, R. E. Investigation of eastern equine encephalomyelitis. III. Pathology in pheasants and incidental observations in feral birds. *Am. J. Hyg.*, 1958, 67: 10-20.
123. Karstad, L. H., Fletcher, O. K., Spalatin, J., Roberts, R., and Hanson, R. P. Eastern equine encephalomyelitis virus isolated from three species of Diptera from Georgia. *Science*, 1957, 125: 395-396.
124. ----- Spalatin, J., and Hanson, R. P. Application of the paper disc technique to the collection of whole blood and serum samples in studies on eastern equine encephalitis. *J. Infect. Dis.*, 1957, 101: 295-299.
125. Kissling, R. E. Host relationships of the arthropod-borne encephalitides. *Ann. N. York Acad. Sc.*, 1958, 70: 320-327.
126. ----- Eastern equine encephalomyelitis in pheasants. *J. Am. Vet. M. Ass.*, 1958, 132: 466-468.
127. ----- Growth of several arthropod-borne viruses in tissue culture. *Proc. Soc. Exp. Biol., N. Y.*, 1957, 96: 290-294. Hamster kidney tissue used.
128. ----- Stamm, D. D., Chamberlain, R. W., and Sudia, A. W. D. Birds as winter hosts for eastern and western equine encephalomyelitis. *Am. J. Hyg.*, 1957, 66: 42-47. Birds are stationary foci of infection.
129. ----- Chamberlain, R. W., Sudia, A. W. D., and Stamm, D. D. Western equine encephalitis in wild birds. *Am. J. Hyg.*, 1957, 66: 48-55.
130. ----- Nelson, D. B. and Stamm, D. D. Venezuelan equine encephalomyelitis in horses. *Am. J. Hyg.*, 1956, 63: 274-287.
131. ----- Nelson, D. B. and Stamm, D. D. Studies on the North American arthropod-borne encephalitides. VIII. Equine encephalitis studies in Louisiana. *Am. J. Hyg.*, 1955, 62: 233-254.

132. Kissling, R. E., Chamberlain, R. W., Eidson, M. E., Sikes, R. K., and Bucca, M. A. Studies on the North American arthropod-borne encephalitides. II. Eastern equine encephalitis in horses. *Am. J. Hyg.*, 1954, 60: 237-250.
133. ----- Sikes, R. K. and Eidson, M. E. Studies on the North American arthropod-borne encephalitides. III. Eastern equine encephalitis in wild birds. *Am. J. Hyg.*, 1954, 60: 251-265.
134. ----- Eidson, M. E. and Stamm, D. D. Transfer of maternal neutralizing antibodies against eastern equine encephalomyelitis virus in birds. *J. Infect. Dis.*, 1954, 95: 179-181.
135. Kokernot, R. H., Shinefield, H. R., and Longshore, W. A. The 1952 outbreak of encephalitis in California: Differential diagnosis. *California M.*, 1953, 79: 73-77.
136. Knowalchuk, J., Russ, S. B., and Buescher, E. L. Russian spring-summer encephalitis-like (R.S.S.E.) viruses from European Russia and southeast Asia. *Bact. Proc.*, 1957, M 7: 66.
137. Kunin, C. M. and Chin, T. D. St. Louis encephalitis in Hidalgo County, Texas. Clinical and pathological features. *Pub. Health Rep.*, 1957, 72: 519-525. 373 cases.
138. Labzoffsky, N. A., Grainger, R. M., and Ross, W. G. Survival of equine encephalomyelitis virus (eastern type) for eleven years at 4<sup>0</sup> C in the presence of cysteine hydrochloride. *Canad. J. Microb.*, 1955, 1: 715-720.
139. La Motte, L. C. Jr. Japanese B encephalitis in bats during simulated hibernation. *Am. J. Hyg.*, 1958, 67: 101-108.
140. Lee, H. W., Hinz, R. W., and Scherer, W. F. Porcine kidney cell cultures for propagation and assay of Japanese encephalitis virus. *Proc. Soc. Exp. Biol.*, N. Y., 1958, 99: 579-583.

141. Lennette, E. H., Wiener, A., Ota, M. I., Fujimoto, F. Y., and Hoffman, M. N. Rapid identification of isolates of western equine encephalitis virus by complement-fixation technique. *Am. J. Hyg.*, 1956, 64: 270-275.
142. ----- Ota, M. I., Dobbs, M. E., and Browne, A. S. Isolation of western equine encephalomyelitis virus from naturally-infected squirrels in California. *Am. J. Hyg.*, 1956, 64: 276-280.
143. ----- Wiener, A., Neff, B. J., and Hoffman, M. N. A chick embryo-derived complement-fixing antigen for western equine encephalomyelitis. *Proc. Soc. Exp. Biol.*, N. Y., 1956, 92: 575-577.
144. ----- Nyberg, M. C., Barghausen, D. M., Chin, T., Fujimoto, F. Y., and Itatani, M. K. The 1952 outbreak of encephalitis in California. Laboratory methods for etiologic diagnosis. *California M.*, 1953, 79: 73-77.
145. Le Veck, G. D., Winn, J. F., and Welch, S. F. Inapparent infection with western equine encephalitis virus; epidemiologic observations. *Am. J. Pub. Health*, 1955, 45: 1409-1416. Weld County, Colorado, an endemic focus for WEE.
146. Liao, S. J. Eastern equine encephalitis in Connecticut; a serological survey of pheasant farmers. *Yale J. Biol.*, 1955, 27: 287-296.
147. Lockart, R. Z. and Groman, N. B. Some factors influencing the interaction of western equine encephalomyelitis and selected host cells. *J. Infect. Dis.*, 1958, 103: 163-171.
148. Longshore, W. A. Jr., Stevens, I. M., Hollister, A. C. Jr., Gittelsohn, A., and Lennette, E. H. Epidemiologic observations on acute infectious encephalitis in California, with special reference to the 1952 outbreak. *Am. J. Hyg.*, 1956, 63: 69-86.
149. ----- and Maranda, E. J. Viral encephalitis. *Am. J. Nursing*, 1956, 56:(4), 447-450.



150. Luginbuhl, R. E., Satriano, S. F., Helmboldt, C. E., Lamson, A. L., and Jungherr, E. L. Investigation of eastern equine encephalomyelitis. II. Outbreaks in Connecticut pheasants. *Am. J. Hyg.*, 1958, 67: 4-9.
151. Lumsden, L. L. St. Louis encephalitis in 1933; observations on epidemiological features. *Pub. Health Rep.*, 1958, 73: 340-353. Paper written but not published in 1933. Author stated at that time the disease was probably transmitted by mosquitoes. Comment (1958), "A concept years ahead of its time."
152. McCollum, R. W. and Foley, J. F. Japanese B encephalitis virus in tissue culture. *Proc. Soc. Exp. Biol.*, N. Y., 1957, 94: 556-560.
153. Marshall, A. L. Jr. Epidemic (arthropod-borne viral) encephalitis in Indiana. *J. Indiana M. Ass.*, 1957, 50: 38-42. SLE endemic in the Ohio River Valley.
154. Medearis, D. N. Jr., and Kibreck, S. An evaluation of various tissues in culture for isolation of eastern equine encephalitis virus. *Proc. Soc. Exp. Biol.*, N. Y., 1958, 97: 152-158.
155. Morris, J. A., O'Connor, J. R., and Smadel, J. E. Infection and immunity patterns in monkeys injected with viruses of Russian spring-summer and Japanese encephalitis. *Am. J. Hyg.*, 1955, 62: 327-341. 32 references.
156. Nir, Y., Fendrich, J., and Goldwasser, R. Some aspects of the pathogenesis of western equine encephalomyelitis virus in the chick embryo. *J. Infect. Dis.*, 1957, 100: 207-211.
157. An outbreak of St. Louis encephalitis in the lower Rio Grande Valley of Texas in 1954. *Pub. Health Rep.*, 1957, 72: 510-511. Brief review of epidemics, 1932-1956.
158. Palmer, R. J. and Finley, K. H. Sequelae of encephalitis. *California M.*, 1956, 84: 98-100.

159. Parks, J. J., Ganaway, J. R., and Price, W. H. Studies on immunologic overlap among certain arthropod-borne viruses. III. A laboratory analysis of three strains of West Nile virus which have been studied in human cancer patients. *Am. J. Hyg.*, 1958, 68: 106-119. 31 references.
160. ----- and Price, W. H. Studies on immunologic overlap among certain arthropod-borne viruses. I. Cross protection relationships among group A viruses. *Am. J. Hyg.*, 1958, 67: 187-206. 45 references; WEE, EEE, and Sinbis viruses.
161. Pavilanis, V., Wright, I. L., and Silverberg, M. Western equine encephalomyelitis: report of a case in Montreal. *Canad. M. Ass. J.*, 1957, 77: 128-130. A year after the illness of a twenty month old infant, the electroencephalogram showed "... an area of dysfunction, potentially epileptogenic in the right occipital area."
162. Pigford, C. A. Infectious encephalitis in west Texas; report of an epidemic. *Texas J. M.*, 1957, 53: 708-711.
163. Pina, F. P. and Merikangas, U. R. Japanese B encephalitis in an American soldier returning from Korea. *N. England J. M.*, 1953, 249: 531-532.
164. Pond, W. L., Russ, S. B., Rogers, N. G., and Smadel, J. E. Murray Valley encephalitis virus; its serological relationship to the Japanese-West Nile-St. Louis encephalitis group of viruses. *J. Immun.*, 1955, 175: 78-84. 34 references.
165. ----- Serological aspects of virus study of the reactions of two viruses isolated during the 1953 epidemic in Slovenia and Austria. *Bull. World Health Org.*, 1955, 12: 591-594.
166. ----- and Warren, J. The Russian spring-summer encephalitis and louping ill group of viruses; relationship of European and Asiatic strains of Russian spring-summer encephalitis viruses and louping ill virus. *J. Infect. Dis.*, 1953, 93: 294-300.

167. Price, W. H. Studies on the immunological overlap among certain arthropod-borne viruses. II. The role of serologic relationships in experimental vaccination procedures. *Proc. Nat. Acad. Sc., U. S.*, 1957, 43: 115-121. SLE, JBE, MVE, WN.
168. ----- The epidemic climate. *Pub. Health Rep.*, 1956, 71: 125-138. 40 references. Arthropod-borne viruses, p. 134-137.
169. Ranzenhofer, E. R., Alexander, E. R., Beadle, L. D., Bernstein, A., and Pickard, R. C. St. Louis encephalitis in Calvert City, Kentucky, 1955; an epidemiologic study. *Am. J. Hyg.*, 1957, 65: 147-161. *Culex pipiens* as vector.
170. Rapp, W. F. Jr. Mosquitoes and encephalitis in Nebraska. *Nebraska State M. J.*, 1955, 40: 290-292. Native song birds are endemic reservoirs for WEE virus.
171. Reagan, R. L., Yancey, F. S., Chang, S. C., and Brueckner, A. L. Transmission of West Nile (B 956 strain) and Semliki Forest virus (MBB 26146-M-404744-958 strain) to suckling hamsters during lactation. *J. Immun.*, 1956, 76: 243-245.
172. Reeves, W. C., Hutson, J. A., Bellamy, R. E., and Scrivani, R. P. Chronic latent infections of birds with western equine encephalitis. *Proc. Soc. Exp. Biol., N. Y.*, 1958, 97: 733-736.
173. ----- Bellamy, R. E., and Scrivani, R. P. Relationships of mosquito vectors to winter survival of encephalitis viruses. I. Under natural conditions. *Am. J. Hyg.*, 1958, 67: 78-89.
174. ----- ----- and Scrivani, R. P. Relationships of mosquito vectors to winter survival of encephalitis viruses. II. Under experimental conditions. *Am. J. Hyg.*, 1958, 67: 90-100.
175. ----- Hammon, W. McD., Doetschman, W. H., McClure, H. E., and Sather, G. E. Studies on mites as vectors of western equine and St. Louis encephalitis viruses in California. *Am. J. Trop. M. Hyg.*, 1955, 4: 90-105.



176. Reeves, W. C., Sturgeon, J. M., French, E. M., and Brookman, B. Transovarian transmission of neutralizing substances to western equine and St. Louis encephalitis viruses by avian hosts. *J. Infect. Dis.*, 1954, 95: 168-178.
177. Rozeboom, L. E. and McLean, D. M. Transmission of the virus of Murray Valley encephalitis by *Culex tarsalis* Coquillett, *Aedes polynesiensis* Marks, and *A. pseudoscutellaris* Theobald. *Am. J. Hyg.*, 1956, 63: 136-139.
178. Rubin, H., Baluda, M., and Hotchin, J. E. The maturation of western equine encephalomyelitis virus and its release from chick embryo cells in suspension. *J. Exp. M.*, 1955, 101: 205-212.  
"... a virus particle is released from the cell within 1 minute after it gains the property of infectiousness."
179. Sabin, A. B. Epidemiology of arthropod-borne encephalitis. *Neurology*, 1958, 8: 878-880.
180. ----- Insect-borne virus diseases of military importance. *Mil. M.*, 1955, 115: 245-251. Table 1, p. 246, lists geographic locations; included are EEE, WEE, SLE, VEE, JBE, MVE, RSSE, Ilhéus, loup-  
ing ill, West Nile, and Semlicki Forest viruses.
181. Sanders, M., Blumberg, A., and Haymaker, W. Polyradiculopathy in man produced by St. Louis encephalitis virus. *South M. J.*, 1953, 46: 606-608. Case; SLE in south eastern Florida.
182. ----- Kabara, J. J., Soret, M. G., and Akin, B. A. Some effects of certain resorcinol derivatives on eastern equine encephalomyelitis. Factors influencing in vitro screening technic. *Proc. Soc. Exp. Biol.*, N. Y., 1953, 82: 369-373.
183. Satriano, S. F., Luginbuhl, R. E., Wallis, R. C., Jungherr, E. L., and Williamson, L. A. Investigation of eastern equine encephalomyelitis. IV. Susceptibility and transmission studies with virus of pheasant origin. *Am. J. Hyg.*, 1958, 67: 21-34.



184. Schaeffer, M., Kissling, R. E., and Chamberlain, R. W. Current view on the North American arthropod-borne virus problem. *Am. J. Pub. Health*, 1958, 48: 336-343.
185. ----- and Arnold, E. H. Studies on the North American arthropod-borne encephalitides. I. Introduction; contributions of newer field-laboratory approaches. *Am. J. Hyg.*, 1954, 60: 231-236.
186. ----- Kissling, R. E., Chamberlain, R. W., and Vanella, J. M. Studies on the North American arthropod-borne encephalitides. IV. Antibody in human beings to the North American arthropod-borne encephalitides. *Am. J. Hyg.*, 1954, 60: 266-268.
187. Scherer, W. F. and Syverton, J. T. The viral range in vitro of a malignant human epithelial cell (strain HeLa Gey). II. Studies with encephalitis viruses of eastern, western, West Nile, St. Louis and Japanese B types. *Am. J. Path.*, 1954, 30: 1075-1082. Viruses multiplied and destroyed HeLa cells.
188. Scrivani, R. P., Reeves, W. C., and Brookman, D. Duration of activity of western equine encephalitis neutralizing antibodies in *Aedes migromaculis* and *Culex tarsalis*. *Am. J. Trop. M. Hyg.*, 1953, 2: 457-463.
189. Shinefield, H. R., Longshore, W. A. Jr., and Lennette, E. H. Studies on a skin test for western equine encephalitis. Preliminary evaluation in man. *J. Immun.*, 1955, 75: 227-238.
190. ----- and Townsend, T. E. Transplacental transmission of western equine encephalomyelitis. *J. Pediat.*, S. Louis, 1953, 43: 21-25.
191. Smith, D. G., Mammay, H. K., Marshall, R. G., and Wagner, J. C. Venezuelan equine encephalomyelitis; laboratory aspects of fourteen human cases following vaccination and attempts to isolate the virus from the vaccine. *Am. J. Hyg.*, 1956, 63: 150-164.

192. Smith, W. M. and Evans, C. Growth of neurotropic viruses in extraneural tissues. VII. Cultivation of M. M. and Western equine encephalitis viruses in cultures of rhesus testicular tissue. *J. Immun.*, 1954, 72: 353-359.
193. Smithburn, K. C. Antigenic relationships among certain arthropod-borne viruses as revealed by neutralization tests. *J. Immun.*, 1954, 72: 376-388. Sera from residents of East Egypt, India, Malaya and Borneo used in tests with viruses of SLE, JBE, MVE, and West Nile.
194. ----- and Bugher, J. C. Ultrafiltration of recently isolated neurotropic viruses. *J. Bact., Balt.*, 1953, 66: 173-177. Viruses included EEE, WEE, SLE, JBE, VEE, RSSE, Ilhéus, West Nile, Semliki Forest, Bwamba, and Bunyamwera.
195. ----- Immunity to neurotropic viruses, especially those of the Japanese B-West Nile group, among indigenous residents of India. *Fed. Proc., Balt.*, 1953, 12: 1513.
196. Sooter, C. A., Schaeffer, M., Gorrie, R., and Aidan Cockburn, T. A. Transovarian passage of antibodies following naturally acquired encephalitis infection in birds. *J. Infect. Dis.*, 1954, 95: 165-167.
197. Southam, C. M. and Green, E. L. Clinical application of the hemagglutination-inhibition test for West Nile virus antibodies. *J. Infect. Dis.*, 1958, 102: 174-178.
198. ----- and Moore, A. E. Induced virus infections in man by the Egypt isolates of West Nile virus. *Am. J. Trop. M. Hyg.*, 1954, 3: 19-50. 90 cancer patient volunteers. Tables summarize findings.
199. ----- Anti-virus antibody studies following induced infection of man with West Nile, Ilhéus and other viruses. *J. Immun.*, 1954, 72: 446-462.
200. Stamm, D. D. Studies on the ecology of equine encephalomyelitis. *Am. J. Pub. Health*, 1958, 48: 328-335.

201. Stamm, D. D. and Kissling, R. E. The influence of reciprocal immunity on eastern and western equine encephalomyelitis infection in horses and English sparrows. *J. Immun.*, 1957, 79: 342-347.
202. Stead, F. M. and Peters, R. F. The 1952 outbreak of encephalitis in California. Vector control aspects. *California M.*, 1953, 79: 91-93.
203. Strode, J. K. Insect-borne viruses. *Pub. Health Rep.*, 1955, 70: 1078-1080. Group A: WEE, VEE, Semliki Forest, and Sinbis. Group B: SLE, JBE, MVE, RSSE.
204. Stulberg, C. S., Berman, L., and Page, R. H. Comparative viral susceptibilities of eight culture strains (Detroit) of human epithelial-like cells. *Virology*, 1956, 2: 844-845.
205. Sudia, W. D., Stamm, D. D., Chamberlain, R. W., and Kissling, R. E. Transmission of eastern equine encephalitis to horses by *Aedes sollicitans* mosquitoes. *Am. J. Trop. M. Hyg.*, 1956, 5: 802-808.
206. Sulkin, S. E., Wisseman, C. L. Jr., Izum, E. M., and Zarafonets, C. Mites as possible vectors or reservoirs of equine encephalomyelitis in Texas. *Am. J. Trop. M. Hyg.*, 1955, 4: 119-135.
207. Sullivan, T. D., Irons, J. V., and Siegel, M. M. St. Louis encephalitis in Hidalgo County, Texas. Laboratory aspects. *Pub. Health Rep.*, 1957, 72: 526-530.
208. Sussman, O., Cohen, D., Gerende, J. E., and Kissling, R. E. Equine encephalitis vaccine studies in pheasants under epizootic and preepizootic conditions. *Ann. N. York Acad. M.*, 1958, 70: 328-341.
209. Sutton, L. S. and Brooke, C. C. Venezuelan equine encephalomyelitis due to vaccination in man. *J. Am. M. Ass.*, 1954, 155: 1473-1476. 1174 inoculations given to a group of 327 persons; fourteen clinical illnesses.



210. Syverton, J. T. and Scherer, W. F. The multiplication of viruses other than poliomyelitis in a stable strain of human epithelial cell, strain HeLa. *Bact. Proc.*, 1953, M2: 42-43.
211. Theiler, M. Action of sodium desoxycholate on arthropod-borne viruses. *Proc. Soc. Exp. Biol.*, N. Y., 1957, 96: 380-382.
212. Thomas, L. A., Eklund, C., and Rush, W. A. Susceptibility of garter snakes (*Thamnophis* Spp.) to western equine encephalomyelitis virus. *Proc. Soc. Exp. Biol.*, N. Y., 1958, 99: 698-700.
213. U. S. Public Health Service. Communicable Disease Center, Atlanta, Georgia. Summary of investigations (No. 12), January-September 1957. 291 p. Arthropod-borne encephalitis studies (Project No. 185-T-49), p. 199-215.
214. U. S. Public Health Service. Communicable Disease Center, Atlanta, Georgia. Report of activities, July 1956-June 1957. 80 p. Arthropod-borne encephalitides, p. 20-23. Maps show distribution of EEE, WEE, and SLE.
215. Victor, J., Smith, D. G., and Pollock, A. D. The comparative pathology of Venezuelan equine encephalomyelitis. *J. Infect. Dis.*, 1956, 98: 55-66.
216. Wallis, R. C., Jungherr, E. L., Luginbuhl, R. E., Helmboldt, C. F., Satriano, S. F., Williamson, L. A., and Lamson, A. L. Investigation of eastern equine encephalomyelitis. V. Entomologic and ecologic field studies. *Am. J. Hyg.*, 1958, 67: 35-45.
217. ----- Taylor, R. M., McCollum, R. W., and Riordan, J. T. Study of hibernating equine mosquitoes in eastern encephalomyelitis epidemic areas in Connecticut. *Mosquito News*, 1958, 18: 1-4.
218. Weaver, O. M., Pieper, S., and Kurland, R. Japanese encephalitis. *Neurology*, 1958, 8: 887-890. Clinical features, pathology and sequelae.



219. Webster, H. De F. Eastern equine encephalomyelitis in Massachusetts. Report of two cases, diagnosed serologically, with complete clinical recovery. N. England J. M., 1956, 255: 267-270.
220. Weinstein, L. and Chang, T. W. The diagnosis of virus infection. Med. Clin. N. America, 1957, 41: 1391-1406. SLE, EEE and WEE studied.
221. Welsh, H. H., Neff, B. J., and Lennette, E. H. Isolation and identification of western equine encephalomyelitis virus from mosquitoes by tissue culture methods. Ann. J. Trop. M. Hyg., 1958, 7: 187-196.
222. Winn, J. F., Palmer, D. F., and Kaplan, W. Development and persistence of western equine encephalitis virus antibodies in experimentally infected pigeons. Cornell Vet., 1957, 47: 337-343.
223. Winter, W. D. Jr. Eastern equine encephalomyelitis in Massachusetts in 1955. Report of two cases in infants. N. England J. M., 1956, 255: 262-267.
224. Woltman, H. W. Encephalitis; historical review and perspective. J. Canad. M. Ass., 1957, 77: 995-1001. Arthropod-borne varieties of encephalitis, p. 1000-1001.
225. Woodring, F. R. Naturally occurring infection with equine encephalomyelitis virus in turkeys. J. Am. Vet. M. Ass., 1957, 130: 511-512.

## CENTRAL AND SOUTH AMERICA

226. Aitken, T. H. G. Virus transmission studies with Trinidadian mosquitoes. *West. Ind. M. J.*, 1957, 6: 229-232.
227. Anderson, C. R., Aitken, T. H. G., Downs, W. G., and Spence, L. The isolation of St. Louis virus from Trinidad mosquitoes. *Am. J. Trop. M. Hyg.*, 1957, 6: 688-692.
228. ----- St. Louis virus in Trinidad. *West. Ind. M. J.*, 1957, 6: 249-253.
229. ----- and Downs, W. G. The isolation of Ilhéus virus from wild-caught forest mosquitoes in Trinidad. *Am. J. Trop. M. Hyg.*, 1956, 5: 621-625. Antibodies demonstrated in sera of two monkeys, a laboratory worker, and several residents of the Ilhéus area.
230. Balter, I., Sottano, T., and Ciccarelli, T. V. Encefalomyelitis equina. *Dia Méd.*, B. Air., 1958, 30: 2366; passim.
231. Bettinotti, C. M. Incidencia de anticuerpos fijadores de complemento para virus de encefalitis ( cuatro especies diferentes) en la población general de Córdoba. *Sem. méd.*, B. Air., 1957, 110: 393-399; passim. 421 healthy persons tested for antibodies of EEE, WEE, SLE, and VEE.
232. Causey, O. R. and Theiler, M. Virus antibody survey on sera of residents of the Amazon Valley in Brazil. *Am. J. Trop. M. Hyg.*, 1957, 7: 36-41. Tested in various locations and on various sized groups. Antibodies were found for EEE, WEE, SLE, VEE, Ilhéus, Semliki Forest, and Bunyamwera viruses.
233. Collier, W. A., Collier, E. E., Tjong, A., and Hung, T. Serological research on encephalitis in Surinam. *Docum. med. geog. trop.*, Amst., 1956, 8: 39-44. 18% of patients reacted positively to the complement fixation test with the antigen of EEE.
234. ----- Winkel, W. E. F., and Blom, F. A. E. Two cases of St. Louis encephalitis in Surinam. *Docum. med. geog. trop.*, Amst., 1953, 5: 225-234.

235. Downs, W. G., Anderson, C. R., and Casals, J. The isolation of St. Louis virus from a nestling bird in Trinidad, British West Indies. *Am. J. Trop. M. Hyg.*, 1957, 6: 693-696.
236. ----- Anderson, C. R., and Theiler, M. Neutralizing antibodies against certain viruses in the sera of residents of Trinidad, B.W.I. *Am. J. Trop. M. Hyg.*, 1956, 5: 626-641. 1055 residents tested. Ilhéus is wide-spread in Trinidad.
237. ----- Aitken, T. H. G., and Delpeche, K. A. Notes on the epidemiology of Ilhéus virus infection in Trinidad B.W.I. *Caribbean M. J.*, 1956, 18: 74-79.
238. Pennimpede, F. C. La encephalomyelitis equina en la republica Argentina; estudio epizootologica. *Rev. Inst. Malbrán*, 1953, 15: 8-17. Human infections, p. 12-13.
239. Rodaniche, E. de, and Galindo, P. Isolation of Ilhéus virus from *Sabethes chloropterus* captured in Guatemala in 1956. *Am. J. Trop. M. Hyg.*, 1957, 6: 686-687.
240. ----- Isolation of the virus of Ilhéus encephalitis from mosquitoes of the genus *Psorophora* captured in Honduras. *Am. J. Trop. M. Hyg.*, 1956, 5: 797-801. Virus found in Brazil, Trinidad, and Honduras.
241. Sanmartin-Barberi, C., Groot, H., and Osorno-Mesa, E. Human epidemic in Colombia caused by the Venezuelan equine encephalomyelitis virus. *Am. J. Trop. M. Hyg.*, 1954, 3: 283-293. 70 cases in village situated in a horse and cattle breeding country.
242. Verlinde, J. D., Molron, J. H., and Wyler, R. Antibodies that neutralize neurotropic arthropod-borne viruses in residents of Curaçao and Indonesia. *Docum. med. geog. trop. Amst.*, 1955, 7: 94-96.



## EUROPE

243. Albrecht, P. Lipotropism of the virus of western type of North American equine encephalomyelitis (WEE) in white mice. *Acta virol. Engl. Ed.*, Praha, 1958, 2: 22-31.
244. ----- Natural foci of the western type of North American equine encephalomyelitis (WEE) in Czechoslovakia. III. Morphology of of experimental infection with Czechoslovak strains of equine encephalomyelitis. *Acta virol. Engl. Ed.*, Praha, 1957, 1: 113-119.
245. ----- Natural foci of the western type of North American equine encephalomyelitis (WEE) in Czechoslovakia. IV. Some questions of pathogenesis of the infection. *Acta virol. Engl. Ed.*, Praha, 1957, 1: 188-197.
246. Andzhaparidge, O. G. A study of purified and concentrated Russian spring-summer encephalitis antisera. *Probl. Virology*, 1957, 2: 99-101.
247. Bárdos, V. The use of suckling white rats in the virological diagnosis of tick-borne encephalitis and equine encephalomyelitis. *Acta virol. Engl. Ed.*, Praha, 1957, 1: 172-179.
248. ----- Natural foci of the western type of North American equine encephalomyelitis (WEE) in Czechoslovakia. V. Isolation of the WEE virus from the brain of *Apodemus flavicollis*. *Acta virol. Engl. Ed.*, Praha, 1957, 1: 198-202.
249. Bedjanic, M., Rus, S., Kmet, J., and Vesenjask-Zmijanac, J. Virus meningo-encephalitis in Slovenia. Clinical observations. *Bull. World Health Org.*, 1955, 12: 503-512.
250. Blaškovič, D. Epidemiologische und immunologische Probleme bei der Zeckenencephalitis. *Wien. klin. Wschr.*, 1958, 70: 742-749.  
Review of literature covering etiology, epidemiology and immunology.



251. Collomb, H. Encéphalites à virus. Méd. trop., Marseille, 1957, 17: 542-553. Review of literature. Author classifies 4 types, Far east group, American group, Eurasian group, and African group.
252. Daneš, L. and Kimerlingová, M. Natural foci of the western type of North American equine encephalomyelitis (WEE) in Czechoslovakia. VI. A fatal case of the infection by the WEE virus in man. Acta virol. Engl. Ed., Praha, 1958, 2: 32-40.
253. Doubov, A. V. Clinical peculiarities of tick-borne encephalitis in the Kuznetsk basin district among various population groups. Probl. Virology, 1957, 2: 357-360.
254. Editorial. A discussion on the nature of tick-borne encephalitides. Probl. Virology, 1957, 2: 310-317.
255. Elste, E. R. Die Encephalitis japonica (B). Fortsch. Neur. Psychiat., 1958, 26: 379-420.
256. Görlich, H. Über chronisch-halluzinatorische Zustände nach Encephalitis epidemica. Psychiat. Neur. med. Psychol., Lpz., 1957, 9: 365-368.
257. Gorchakovskaia, N. N. The duration of the effect of destroying Ixodes persulcatus P. Sch. ticks in foci treated with acaricides and the possibility of dusting with insecticide from the air. Probl. Virology, 1957, 2: 304-309.
258. Grastchenkov, N. I. Le virus de l'encéphalite transmissible par tiques. Bruxelles méd., 1957, 37: 217-225.
259. Grešíková, M. Excretion of the tick-borne encephalitis in the milk of subcutaneously infected cows. Acta virol. Engl. Ed., Praha, 1958, 2: 188-192.
260. Grinschgl, G. Virus meningo-encephalitis in Austria. Clinical features. Bull. World Health Org., 1955, 12: 535-564.

261. Haussman, H. G. Über serodiagnostische Erfahrungen bei virus-meningitiden usw., Virusencephalitiden und anderen entzündlichen und nichtentzündlichen Erkrankungen des Nervensystems. Verh. Deut. ges. inn. Med., 1955, 61: 228-231.
262. Havlík, O., Kolman, J. M., and Lím, D. The incidence of tick-borne encephalitis in wild birds. J. Hyg. Epidem., Praha, 1957, 1: 367-376. Birds are important vectors in endemic areas.
263. Henner, K. and Hanzal, F. Encéphalite Tchécoslovaque à tiques; tableau clinique, diagnostic et traitement. Rev. neur., Par., 1957, 96: 384-408. 72 references.
264. Hennessen, W. Die serologische Diagnostik der Viruskrankungen des Menschen. Erg. Mikrob. Immunforsch., 1957, 30: 288-316. Virusencephalitiden, p. 309-310.
265. Hloucal, L. and Slonim, D. Neue Erfahrungen über die tschechische Zeckencephalitis. Schweiz. med. Wschr., 1954, 84: 1085-1088.
266. Hoff, H. Die Encephaliden Mitteleuropas. Schweiz. Arch. Neur. Psychiat., 1953, 71: 108-130.
267. Jandásek, L. and Pesek, J. Ein Beitrag zur Serologie der Zecken-enzephalitis. Zschr. Immunforsch., 1956, 113: 261-270.
268. ----- Die Bluthirnschranke bei der experimentellen Zeckenenzephalitis der Maus. Zschr. Immunforsch., 1958, 115: 30-37.
269. Jettmar, H. M. Isohämolyse das Virus der Zecken-Encephalitis. Zschr. Hyg., 1957, 143: 355-363.
270. Kerékjártó, B. and Hieronymi, B. Über die Vermehrung einiger tierpathogener Virusarten in Epithelzellkulturen von Schweineniere. Arch. Virusforsch., 1958, 8: 469-479. Laboratory procedures in detail.

271. Kerékjártó, B. and Hieronymi, B. Zur virologischen Verwendung von Hammelnierenzellkulturen. Arch. Virusforsch., 1958, 8: 480-484.  
RSSE virus cultured in sheep kidney tissue.
272. Kmet, J., Vesenuak-Zmijanac, J., Bedjanč, M., and Rus, S. Virus meningo-encephalitis in Slovenia. Epidemiological observations. Bull. World Health Org., 1955, 12: 491-501.
273. Környey, S. Zur vergleichenden Pathologie der Zeckenencephalitiden. Verh. Deut. Ges. inn. Med., 1955, 61: 231-236. Tick-borne encephalitis in Hungary.
274. Krausler, J., Kraus, P., and Noritisch, H. Klinische und virologisch-serologische Untersuchungsergebnisse bei Frühsommer-Meningoenzephalitis und anderen Virusinfektionen des ZNS in Bezirk Neunkirchen. Wien. Klin. Wschr., 1958, 70: 634-637.
275. Krov, H. and Milek, E. Die Bedeutung einiger Laboratorium-Untersuchungen in der tschechischen Zeckenmeningoenzephalitis. Helv. paediat. acta, 1956, 11: 131-135.
276. Lasch, F. Über Änderung des Krankheitsbildes der endemischen, virusbedingten Meningoenzephalitis in Kärnten in den Jahren, 1955 bis 1957. Wien. med. Wschr., 1958, 108: 587-589.
277. ----- and Moitz, E. Ueber das Krankheitsbild der epidemischen abakteriellen (durch Zecken übertragenen?) virusbedingten Meningo-Encephalo-Myelitis. Wien. Klin. Wschr., 1954, 66: 436-440. 223 cases (1948-1953).
278. Lavillaureix, J., Vermeil, C., and Petrovic, A. Pouvoir pathogène expérimental du virus West Nile pour la gerbille et pour la souris blanche. C. rend. Soc. biol., 1958, 152: 1007-1009.
279. Libiková, H. Natural foci of western type of North American equine encephalomyelitis (WEE) in Czechoslovakia. I. Isolation and identification of viruses in WEE from ticks and small mammals in East Slovakia and serological investigation. Acta virol. Engl. Ed., Praha, 1957, 1: 93-101.



280. Libiková, H. Natural foci of western type of North American equine encephalomyelitis (WEE) in Czechoslovakia. III. Experimental pathogenicity of viruses of WEE from Slovakia for laboratory, domestic, and wild animals. *Acta virol. Engl. Ed.*, Praha, 1957, 1: 102-111.
281. Likar, M. Some observations on the value of virus isolations and serological tests for the routine diagnosis of neurotropic virus infections; Slovenian experience. *Schweiz. Zschr. allg. Path.*, 1958, 21: 670-681.
282. ----- and Dane, D. S. An illness resembling acute poliomyelitis caused by a virus of the Russian spring-summer encephalitis, louping ill group, in northern Ireland. *Lancet*, 1958, 1: 456-458.
283. ----- and Kmet, J. Virus meningo-encephalitis in Slovenia. IV. Isolation from the ticks *Ixodes ricinus*. *Bull. World Health Org.*, 1956, 15: 275-279.
284. Miskolczy, D., Csiky, O., Vendég, V., Abraham, A., Waitsuk, P., and Wagner, C. An epidemic of virotic encephalitis (transmitted by mosquitoes) at the end of summer-autumn 1955 in Tg, Mures. *Rumanian M. Rev.*, 1957, 1: 53-56.
285. Mollaret, P. L'intérêt spéculatif et pratique du problème des encéphalites. *Marseille méd.*, 1956, 93: 579-777.
286. Molron, J. H. Contribution du laboratoire au diagnostic des viroses. *Acta clin. belg.*, 1957, 12: 162-165. Complement fixation is useful in the diagnosis of SLE, BJE, and RSSE.
287. Moritsch, H. and Krausler, J. Die endemische Frühsommer-Meningo-Encephalo-Myelitis im Wiener Becken (Schneidersche Krankheit). *Wien klin. Wschr.*, 1957, 69: 921-6; continued, 952-956, and 965-970.
288. Oker-Blom, N. Kumlinger disease; a meningo-encephalitis occurring in the Aaland Islands. *Ann. med. exp. biol. fenn.*, 1956, 34: 309-318. "It is assumed the disease belongs to the Russian spring summer group".



289. Oker-Blom, N. Propagation of louping-ill virus in malignant human epithelial cells, strain HeLa. *Ann. med. exp. fenn.*, 1956, 34: 199-205.
290. Pattyn, S. R. and Wyler, R. Méningo-encéphalite à virus en Autriche. 4. La virémie dans l'infection expérimentale. Essais de transmission par les moustiques. *Bull. World Health Organ.*, 1955, 18: 581-589.
291. Payan, H., Toga, M., and Gastaut, H. Étude anatomique de l'encéphalite Japonaise B expérimentale chez le singe. *Ann. anat.path., Par.*, 1957, 2: 150-181.
292. Pedersen, E. Epidemic encephalitis in Jutland. A clinical survey for the years 1952-1954. *Danish M. Bull.*, 1956, 3: 65-76.
293. Porterfield, J. S. Use of goose cells in haemagglutination tests with arthropod-borne viruses. *Nature*, 1957, 180: 1201-1202. Tested viruses of EEE, WEE, SLE, VEE. Ilhéus, Semliki Forest, and Bunyamwera.
294. Rampas, J. Die tschechoslowakische Zeckenmeningoenzephalitis. *Prophylaxe*, 1955, 2: 6-9.
295. Richling, E. Virus meningo-encephalitis in Austria. Epidemiological features. *Bull. World Health Org.*, 1955, 12: 521-534.
296. Rico-Avello, C. Epidemiología y profilaxis de algunas encefalopatías virásicas. *Rev. neur. clin.*, 1953, 1: 10-13. Active immunization with vaccines is an effective protection.
297. Sanna, A. and Angelillo, B. Ricerche sull' eventuale presenza di anticorpi neutralizzanti il virus del louping-ill ovini della Sardegna. *Igiene mod.*, 1957, 50: 119-127.

298. Sanna, A. and Nuzzolillo, L. Sulla frequenza di anticorpi neutralizzanti il virus dell' encefalite primaverile-estiva Russa nei profughi provenienti dalla Slovenia. *Igiene mod.*, 1957, 50: 128-134. 4 of 49 refugees showed serum antibodies.
299. ----- and Angelillo, B. Osservazioni e ricerche su alcuni aspetti del virus dell' encefalite primaverile-estiva Russa (RSSE). *Igiene mod.*, 1957, 50: 392-403.
300. ----- Sulla termoresistenza del virus della encefalite primaverile-estiva Russa (RSSE). *Igiene mod.*, 1956, 49: 1109-1118.  
Raw goat's milk has been suggested as a possible source of infection.
301. ----- Sullo sviluppo del virus della Foresta Semliki in colture di cellule HeLa. *Igiene mod.*, 1957, 50: 404-408.
302. ----- Vecchie e nuove acquisizioni sull' epidemiologia delle encefaliti virali da artropodi. *Igiene mod.*, 1956, 49: 689-749. Epidemiology; geographic distribution; seasonal incidence; vectors; reservoirs; unproven data.
303. Sixth International Congress on Tropical Medicine and Malaria. Lisbon, September 1958. *J. Trop. M. Hyg.*, Lond., 1958, 61: 241-252. Arthropod-borne virus infections, p. 249-250. Brief summaries of reports made by A. B. Sabin, K. C. Smithburn, J. Casals, and W. C. Reeves.
304. Slonim, D. and Kramár, J. Versuch der Übertragung des Virus der tschechoslowakischen Zeckenencephalitis durch einige Mückenarten. *Zbl. Bakt.* (Abt. Orig.), 1956, 165: 64-68.
305. Smorodintsev, A. A. Tick-borne spring-summer encephalitis. *Progr. M. Virol.*, N. Y., 1958, 1: 210-247. Bibliography, p. 242-247. Review of literature.
306. Tikhonenko, T. I. and Borodina, T. A. Composition and content of nucleic acids in the brain of white mice infected by Japanese B and tick-borne encephalitis viruses. *Acta virol.*, Engl. Ed., Praha, 1958, 2: 152-157.

307. Tongeren, H. A. E. van, Wilterdink, J. B., Wyler, R., and Richling, E. Encephalitis in Austria. A serological survey followed up by an epidemiological study in the endemic region of Styria during the outbreak of 1954. Arch. ges. Virusforsch., Wien, 1954/1955, 6: 143-157.
308. ----- Encephalitis in Austria. Excretion of virus by milk of experimentally infected goat. Arch. ges. Virusforsch., Wien, 1954/1955, 6: 158-162.
309. Tonini, G. and Missere, G. Encefalomielite sperimentale; ricerche fisiopatologiche e terapeutiche. Arch. ital. sc. farm., 1958, 8: 171-224.
310. Van Bogaert, L. Aspects cliniques des meningo-encéphalites actuelles d'origine inconnue mais dites virales en Europe occidentale. Encéphale, 1956, 45: 1267-1293. Case.
311. ----- Sur une observation mortelle d'encéphalite aiguë nécrasante; sa situation vis-à-vis du groupe des encéphalites transmises par arthropodes et l'encéphalite herpétique. Rev. neur., Par., 1955, 92: 329-356. Brain pathology found at postmortem.
312. Verlinde, J. D. Virus Enzephalitis in Mitteleuropa. Münch med. Wschr., 1956, 98: 1029-1032. Virus encephalitis in Styria and Slovenia.
313. ----- Tongeren, H. A. E. van, Pattyn, S. R., and Rozenzweig, A. Virus meningo-encephalitis in Austria. Pathogenic and immunologic properties of the virus. Bull. World Health Org., 1955, 12: 565-579.
314. Vesenjāk-Zmijanac, J., Bedjanĭć, M., Rus, S., and Kmet, J. Virus meningo-encephalitis in Slovenia. III. Isolation of the causative agent. Bull. World Health Org., 1955, 12: 513-520.
315. Vetterlein, W. and Schröder, M. Anthropeozoonose "Louping-ill," ein Virusencephalitis und ihre Beziehungen zu ähnlichen Erkrankungen. Zschr. klin. Med., 1956, 154: 155-164.



316. Von Procházka, J., Krov, H., Mágrová, J., and Vogir, R. Psychoneurotische Störungen nach Erkrankungen an tschechoslowakischer Zeckenencephalitis. *Helv. paediat. acta*, 1956, 11: 125-130.
317. Zeipel, G. von, and Svednyr, A. Growth of the viruses of the Russian spring-summer louping-ill group in tissue culture. *Arch. ges. Virusforsch.*, Wien, 1958, 8: 370-384.
318. Zil'ber, L. A. History of the study of the far-eastern form of tick-borne encephalitis. *Probl. Virology*, 1957, 2: 330-339.

#### AFRICA

319. Forman, F. The fevers of Africa. IV. The encephalitides in Africa. *Centr. Afr. J. M.*, 1956, 2: 408-412.
320. Frothingham, T. E. Tissue culture applied to the study of Sindbis virus. *Am. J. Trop. M. Hyg.*, 1955, 4: 863-871. A test for the demonstration of neutralizing antibodies in human sera was developed.
321. Goldwasser, R. A. and Davies, A. M. Transmission of a West Nile-like virus by *Aedes aegypti*. *Tr. R. Soc. Trop. M. Hyg.*, 1953, 47: 336-337.
322. Hurlbut, H. S. West Nile virus infection in arthropods. *Am. J. Trop. M. Hyg.*, 1956, 5: 76-85.
323. Kokernot, R. H., Smithburn, K. C., de Meillon, B., and Paterson, H. E. Isolation of Bunyamwera virus from a naturally infected human being and further isolations from *Aedes (Banksinella) circumluteolus* Theo. *Am. J. Trop. M. Hyg.*, 1958, 7: 579-584. Case. Laboratory technic in detail.
324. ----- Smithburn, K. C., and Weinbren, M. P. Neutralizing antibodies to arthropod-borne viruses in human beings and animals in the Union of South Africa. *J. Immun.*, 1956, 77: 313-323. 7,553 serum-virus tests on residents; locations indicated on map.



325. Mason, P. J. Haemagglutination by Bunyamwera virus. Rep. East. Afr. Virus Res. Inst., 1955-1956, p. 31.
326. ----- Haemagglutination by Semliki Forest virus (SFV) Rep. East. Afr. Virus Res. Inst., 1955-1956, p. 30.
327. Pellissier, A. Isolément d'un virus encéphalomyélitique à Brazzaville. Étude immunologique. Ann. Inst. Pasteur, 1954, 86: 53-68.
328. Rose, J. R. An outbreak of encephalomyelitis in Sierra Leone. Lancet, 1957, 2: 914-916. 45 cases, 5 in detail.
329. Ross, R. W. and Santos, D. West Nile virus. Protection-tests on the sera of cattle from Karamoja. Rep. East. Afr. Virus Res. Inst., 1954, p. 14.
330. Smithburn, K. C., Taylor, R. M., Rizk, F. and Kader, A. Immunity to certain arthropod-borne viruses among indigenous residents of Egypt. Am. J. Trop. M. Hyg., 1954, 3: 9-18.
331. Taylor, R. M., Work, T. H., Hurlbut, H. S., and Rizk, F. A study of the ecology of West Nile virus in Egypt. Am. J. Trop. M. Hyg., 1956, 5: 579-620.
332. ----- Hurlbut, H. S., Work, T. H., Kingston, J. R., and Frothingham, T. E. Sinbis virus: a newly recognized arthropod-transmitted virus. Am. J. Trop. M. Hyg., 1955, 4: 844-862. Immunologic classification places Sinbis virus in Group A (Casals) with EEE, WEE, VEE, and Semliki Forest viruses.
333. Weinbren, M. P., Kokernot, R. H., and Smithburn, K. C. Strains of Sinbis-like virus isolated from culicine mosquitoes in the Union of South Africa. Isolation and properties. South Afr. M. J., 1956, 30: 631-636.

334. Weinbren, M. P. Sheep disease. Rep. East Afr. Virus Res. Inst., 1955-1956, p. 28-30.
335. ----- Identification of the Lunyo strain of virus. The production of antibodies to the virus by animals inoculated with aliquots of the stored mosquito suspension. Rep. East Afr. Virus Res. Inst., 1955-1956, p. 22-25. Tests made with viruses of Bunyamwera, Semliki Forest, West Nile, and Bwanba.
336. ----- The occurrence of West Nile virus in South Africa. South Afr. M. J., 1955, 29: 1092-1097.
337. Williams, M. C. Semliki Forest virus in mice. Rep. East Afr. Virus Res. Inst., 1956-1957, p. 11.
338. ----- and Weinbren, M. P. Semliki Forest virus in mice. Rep. East Afr. Virus Res. Inst., 1955-1956, p. 30.
339. Work, T. H., Hurlbut, H. S., and Taylor, R. M. Indigenous wild birds of the Nile Delta as potential West Nile virus circulating reservoirs. Am. J. Trop. M. Hyg., 1955, 4: 872-888.
340. ----- and Taylor, R. M. Isolation of West Nile virus from hooded crow and rock pigeon in the Nile Delta. Proc. Soc. Exp. Biol., N. Y., 1953, 84: 719-722.

## ASIA, AND THE PACIFIC ISLANDS

341. Agarwal, S. C. Current trends in the laboratory diagnosis of virus infections. *J. Ind. M. Ass.*, 1956, 26: 388-390.
342. Ando, K. and Satterwhite, J. B. Evaluation of Japanese B encephalitis vaccine. III. Okayama field trial, 1946-1949. *Am. J. Hyg.*, 1956, 63: 230-237.
343. Bernkopf, H., Levine, S., and Nerson, R. Isolation of West Nile virus in Israel. *J. Infect. Dis.*, 1953, 93: 207-218.
344. Bhatt, P. N. and Work, T. H. Tissue culture studies on arbor viruses of the Japanese B-West Nile complex. *Proc. Soc. Exp. Biol.*, N. Y., 1957, 96: 213-218.
345. Caubert, P. and Netter, R. Les encéphalites dans le Sud-Vietnam. *Sem. hôp. Paris*, 1957, 33: 2674-2679.
346. Chang, H.-T., Ch'iu, F.-H. and Wang, H.-C. A diagnostic skin test for epidemic encephalitis due to Japanese B virus. *Chin. M. J.*, 1954, 72: 25-32.
347. Chou, Pei-An. Hemagglutination of Japanese B encephalitis. I. Preparation and properties of dried hemagglutinin. *Chin. M. J.*, 1958, 77: 162-168.
348. ----- Hemagglutination of Japanese B encephalitis. II. Study of inhibitor in mouse brain. *Chin. M. J.*, 1957, 77: 168-173.
349. Chu, H. H. Hemagglutination test for Japanese B encephalitis virus; a preliminary report. *Chin. M. J.*, 1954, 72: 210-214.
350. Edgren, D. C., Palladino, V. S. and Arnold, A. Japanese B and mumps encephalitis. A clinicopathological report of simultaneous outbreaks on the Island of Guam. *Am. J. Trop. M. Hyg.*, 1958, 7: 471-480. 46 natives and 8 navy personnel.



351. Editorial. Epidemic encephalitis. J. Ind. M. Ass., 1958, 31: 410-411.
352. Editorial. Viral encephalitides. J. Ind. M. Ass., 1956, 26: 391-394.
353. Fendrich, J., Nir, Y., and Goldwasser, R. A. Studies on the behavior of West Nile and Western equine encephalomyelitis viruses in embryonated eggs. J. Infect. Dis., 1957, 100: 141-146.
354. Gieraths, F. J. and Yokota, M. Über die japanische B Enzephalitis. Deut. med. Wschr., 1956, 81: 1222-1226.
355. Goldblum, N., Sterk, V. V. and Jasinska-Klinberg, W. The natural history of West Nile fever. II. Virological findings and the development of homologous and heterologous antibodies in West Nile infection in man. Am. J. Hyg., 1957, 66: 363-380.
356. ----- Sterk, V. V., and Paderski, B. West Nile fever; the clinical features of the disease and the isolation of West Nile virus from the blood of nine human cases. Am. J. Hyg., 1954, 59: 89-103.  
A marked rise in specific complement-fixing antibodies occurred in 18 of 24 cases.
357. Gordon Smith, C. E. The distribution of antibodies to Japanese encephalitis, dengue and yellow fever viruses, in five rural communities in Malaya. Tr. R. Soc. Trop. M. Hyg., Lond., 1958, 52: 237-252.
358. ----- A virus resembling Russian spring-summer encephalitis virus from an ixodid tick in Malaya. Nature, 1956, 178: 581-582.
359. Gour, K. H. Virus encephalitis (a clinical study of 106 cases.) J. Ind. M. Ass., 1956, 26: 384-388. "...Probably arthropod-borne."



360. Gresser, I., Hardy, J. L., Hu, S. M. K., and Sherer, W. F. Factors influencing transmission of Japanese B encephalitis virus by a colonized strain of *Culex tritaeniorhynchus* Giles, from infected pigs and chicks to susceptible pigs and birds. *Am. J. Trop. M. Hyg.*, 1958, 7: 365-373. This mosquito is the principle natural vector of JBE virus in Japan.
361. ----- and Sherer, W. F. The growth curve of Japanese encephalitis virus in the vector mosquito of Japan, *Culex Tritaeniorhynchus*. *Jap. J. Exp. M.*, 1958, 28: 243-248.
362. Hale, J. H., Colless, D. H., and Lim, K. A. Investigation of the Malaysian form of *Culex tritaeniorhynchus* as a potential vector of Japanese B encephalitis virus on Singapore Island. *Ann. Trop. M. Parasit., Liverp.*, 1957, 51: 17-25.
363. ----- Lim, K. A., and Colless, D. H. Investigation of domestic pigs as a potential reservoir of Japanese B encephalitis on Singapore Island. *Ann. Trop. M. Parasit., Liverp.*, 1957, 51: 374-379.
364. ----- and Lee, L. H. Serological evidence of the incidence of Japanese B encephalitis virus infection in Malaysia. *Ann. Trop. M. Parasit., Liverp.*, 1955, 49: 293-8.
365. ----- Farrant, P. C., and Edwards, D. A case of Japanese B. encephalitis. *J. R. Army M. Corps.*, 1954, 100: 117-120.
366. ----- and Lae, L. H. Transplacental passage of antibody to Japanese B encephalitis virus. *J. Path. Bact., Lond.*, 1954, 68: 631-632.
367. Hammon, W. McD., Schrack, W. D. Jr., and Sather, G. E. Serological survey for arthropod-borne virus infections in the Philippines. *Am. J. Trop. M. Hyg.*, 1958, 7: 323-328.
368. ----- Sather, G. E., and McClure, H. E. Serologic survey of Japanese B encephalitis virus infection in birds in Japan. *Am. J. Hyg.*, 1958, 67: 118-133.

369. Hammon, W. McD., Tigertt, W. D., and Sather, G. E. Epidemiologic studies of concurrent "virgin" epidemics of Japanese B encephalitis and of mumps on Guam 1947-1948, with subsequent observations including dengue through 1957. *Am. J. Trop. M. Hyg.*, 1958, 7: 441-467.
370. ----- Viral infections of the central nervous system, with particular reference to the Philippine Islands. *St. Tomás J. M.*, 1954, 9: 159-164.
371. Hatano, M. and Mori, N. Studies on the hemagglutination of Japanese B encephalitis virus. *Virus*, 1954, 4: 386-387.
372. Henmi, M. Studies on growth and cytopathogenic effect of some viruses on embryo tissue culture cells from various kinds of animals. Influence of immune serum upon the cytopathogenic effect of viruses in tissue culture. *Virus*, 1958, 8: 454-455. Tests included WEE, EEE, VEE.
373. Hu, H. Y., Lee, P-H. and Shih, S-H. Antibody response to intracutaneous and subcutaneous vaccination against Japanese B encephalitis. *Chin. M. J.*, 1956, 74: 489-495.
374. Huang, C. H. Studies on host factors in inapparent Japanese B encephalitis. *Acta virol., Engl., Ed., Praha*, 1957, 1: 83-91.
375. ----- Studies of virus factors as causes of inapparent infection in Japanese B encephalitis; virus strains, viraemia, stability to heat and infective dosage. *Acta virol. Engl., Ed., Praha*, 1957, 1: 36-45.
376. Ishii, K. Arima, S., and Takahasi, R. Serum antibody tested for 2 years after Japanese encephalitis infection. *Jap. J. M. Sc.*, 1953, 6: 351-363.
377. Iyer, C. G. S. and Hadley, G. G. Pathological findings in fatal cases of encephalitis in North Arcot District, Madras, India. *Ind. J. M. Sc.*, 1957, 11: 227-235. 3 post-mortem examinations.

378. Kerr, J. A. and Gatne, P. B. Reconnaissance of immunity to six viruses in southern India. *Ind. J. M. Res.*, 1954, 42: 319-332.
379. Khan, N. Jamshedpur fever. A preliminary report. *Ind. J. M. Sc.*, 1954, 8: 597-609. Report on 400 cases. Fever similar to that of the virus encephalitides.
380. Kitaoka, M. and Ishikuro, K. Comparison of antibody against Japanese - St. Louis - and western equine encephalitis viruses in Japanese mother and her foetus. *Virus*, 1956, 6: 185.
381. Kudo, M., Mutai, S., and Uraguchi, K. The effects of cortisone, cortate, parotin and adrenalectomy on Japanese encephalitis virus infection in mice. *Yokohama M. Bull.*, 1954, 5: 337-344.
382. Kumagi, K., Kurochi, Y., and Nishi, H. On the presence of fatty acids in the spinal fluid of Japanese encephalitis patients. *Jap. J. M. Sc. Biol.*, 1955, 8: 81-91. 9 cases.
383. Lakshmana, R. R. Clinical observations on Kyasanur Forest disease cases. *J. Ind. M. Ass.*, 1958, 31: 113-116. 34 cases.
384. Lapeyssonnie, L. and Gobalakichenin, S. Clinical features about Japanese B encephalitis in Pondicherry. *Antiseptic, Edinb.*, 1958, 55: 405-417.
385. ----- Japanese B encephalitis in Pondicherry. *J. Ind. M. Ass.*, 1957, 29: 1-6.
386. ----- and Niaguy, C. Encéphalite japonaise à Pondicherry. *Méd. trop., Marseille*, 1956, 16: 229-240.
387. Liu, Y-F., Teng, C-L., and Liu, K. Cerebral cysticercosis as a factor aggravating Japanese B encephalitis. *Chin. M. J.*, 1957, 75: 1010-1017.



388. Lu, C-H. and Yuan, M-T. The effect of gamma globulin in experimental Japanese B encephalitis infection in mice. *Acta microbiologica sinica*, 1957, 5: 215-216.
389. Marburg, K., Goldblum, N., Sterk, V. V., Jasinska-Klinberg, W., and Klingsberg, M. A. The natural history of West Nile fever. I. Clinical observations during an epidemic in Israel. *Am. J. Hyg.*, 1956, 64: 259-269.
390. Matsuyama, H. Pathological studies on the central nervous system of encephalitis japonica. *Keio J. M.*, 1955, 4: 11-24.
391. Matumoto, M., Kitaoka, M., and Burns, K. F. Evaluation of Japanese B encephalitis vaccine. II. Serologic response following subcutaneous and intradermal administration. *Am. J. Hyg.*, 1956, 63: 228-229.
392. Netter, R., Goueffon, and Triau, R. Enquête sérologique sur l'encéphalite japonaise B au Viet-Nam. I. Recherche chez l'homme. *Bull. Soc. path. exot., Par.*, 1956, 49: 883-889. 300 tests of human sera.
393. ----- and Triau, R. Enquête sérologique sur l'encéphalite japonaise B au Viet-Nam. II. Recherche chez divers animaux domestiques. *Bull. Soc. path. exot., Par.*, 1956, 49: 889-892. 277 horses, cattle, goats, etc. tested.
394. Okuna, T., Okuma, M., Nomura, S., and Kitaoko, M. An evaluation of the plate complement fixation test with Japanese B encephalitis and polio viruses. *Jap. J. M. Sc. Biol.*, 1958, 11: 259-275. 20 references.
395. Pieper, S. J. L., and Kurland, L. T. Sequelae of Japanese B and mumps encephalitis. Recent follow-up of patients affected in 1947-1948 epidemic on Guam. *Am. J. Trop. M. Hyg.*, 1958, 7: 481-490. 43 cases, examined after 9 years; 25 had mild psychiatric sequelae.



396. Pond, W. L., Russ, S. B., Lancaster, W. E., Audy, J. R., and Smadel, J. E. Japanese encephalitis in Malaya. Distribution of neutralizing antibodies in man and animals. *Am. J. Hyg.*, 1954, 59: 17-25.
397. Prévot, M., Puyuelo, V. B., Philpot, V. B., and Guicheney, A. Première identification du virus de l'encéphalite B Japonaise au Viet-Nam. *Bull. Soc. path. exot., Par.*, 1954, 47: 490-492.
398. Puyuelo, H. and Prévot, M. Note préliminaire basée sur l'étude de 98 cas d'encéphalite saisonnière dans les troupes Franco-Vietnamiennes du Tonkin. *Bull. Soc. path. exot., Par.*, 1953, 46: 872-877.
399. Sabin, A. B. and Tigertt, W. D. Evaluation of Japanese B encephalitis vaccine. I. General background and methods. *Am. J. Hyg.*, 1956, 63: 217-227.
400. Sano, I. and Taketomo, Y. On the ketosis of Japanese B encephalitis patients. *Fol. Psychiat. neur. jap.*, 1954, 8: 144-156. Ketone bodies in spinal fluid and aid to diagnosis.
401. Scherer, W. F. Studies of the natural history of encephalitis virus in Japan. *Univ. Minnesota M. Bull.*, 1958, 29: 154-156. Cycle; mosquitoes, birds, pigs, man. Interepidemic residence of virus is still an enigma.
402. ----- Moyer, J. T., and Izumi, T. The role of domestic pigs in the ecology of Japanese encephalitis in Japan. *Bact. Proc.*, 1958, M4: 59.
403. Seal, S. C. and Ghose Chowdbury, R. Epidemiological aspects of the 1954 outbreak of encephalitis in Jamshedpur. *J. Ind. M. Ass.*, 1956, 26: 371-384.

404. Shimizu, T., Kawakami, Y., Fukuhara, S., and Matumoto, M. Experimental stillbirth in pregnant swine infected with Japanese encephalitis virus. *Jap. J. Exp. M.*, 1954, 24: 363-375.
405. Shuey, H. E. and Berge, T. O. Isolation of Japanese B encephalitis virus; report of a fatal case in an American soldier returned from Korea. *J. Am. M. Ass.*, 1956, 162: 564-567. Illness started after boarding ship for U. S. from Korea.
406. Sidhu, A. S. and Taneja, P. N. Encephalitis epidemic in infants and children in Delhi (1954-1955). A three years follow up study. *Ind. J. Child Health*, 1958, 7: 589-607.
407. Smithburn, K. C., Kerr, J. A., and Gatne, P. B. Neutralizing antibodies against certain viruses in the sera of residents of India. *J. Immun.*, 1954, 72: 248-257.
408. ----- Neutralizing antibodies against arthropod-borne viruses in the sera of long-term residents of Malaya and Borneo. *Am. J. Hyg.*, 1954, 59: 157-163.
409. Southam, C. M. Serologic studies of encephalitis in Japan. I. Hemagglutination inhibiting, complement-fixing, and neutralizing antibody following overt Japanese B encephalitis. *J. Infect. Dis.*, 1956, 99: 155-162. Serum studies of 43 Japanese and 23 American patients.
410. ----- Serological studies of encephalitis in Japan. II. Inapparent infections by Japanese B encephalitis virus. *J. Infect. Dis.*, 1956, 99: 163-169. "...at least 500 inapparent infections by Japanese B virus occurred per 1 case of clinically apparent disease."
411. ----- Serological studies of encephalitis in Japan. III. Epidemic encephalitis other than Japanese B encephalitis in Tokyo. *J. Infect. Dis.*, 1956, 99: 170-173. 40 cases.
412. Spigland, I., Jasinska-Klingberg, W., Hofshi, E., and Goldblum, N. (Clinical and laboratory observations in an outbreak of West Nile fever in Israel.) *Harefuah*, 1958, 54: 280-281. English summary.

413. Tahori, A. S., Sterk, V. V., and Goldblum, N. Studies on the dynamics of experimental transmission of West Nile virus by *Culex molestus*. *Am. J. Trop. M. Hyg.*, 1955, 4: 1015-1027.
414. Taneja, B. L., Wanchoo, S. H., Dutta, R. H., and Kabra, S. L. Histological study of encephalitis in northern India. *Ind. J. M.*, 1955, 43: 775-782.
415. Tani, T. and Okubo, T. Hemagglutination reaction of Japanese B encephalitis virus; regaining of once lost hemagglutinin. *Jap. J. M. Sc.*, 1954, 7: 259-264.
416. Tigertt, W. D. and Berge, T. O. Japanese B encephalitis. *Am. J. Pub. Health*, 1957, 47: 713-718. 33910 persons vaccinated; this resulted in a five fold decrease of cases as compared with unvaccinated cases.
417. ----- Burns, K. F., and Satterwhite, J. P. Evaluation of Japanese B encephalitis vaccine. IV. Pattern of serologic response to vaccination over a five-year period in an endemic area (Okayama, Japan). *Am. J. Hyg.*, 1956, 36: 238-249.
418. Toda, M. A method of cultivation and multiplication of Japanese B encephalitis virus in deembryonated eggs. *Virus*, 1956, 6: 456.
419. Tung, H. C. and Li, H. Y. Pathologic changes of Japanese B encephalitis. *Chin. J. Path.*, 1957, 3: 1-10. Autopsy findings in 38 cases.
420. Ueda, T. and Toyoshima, S. Fundamental chemotherapeutic studies and clinical effect of PANS against Japanese encephalitis. *Keio J. M.*, 1956, 5: 123-143.
421. Wang, Y. C. and Chu, L. Y. Isolation of Japanese B encephalitis virus from the spinal fluid. *Chin. M. J.*, 1957, 75: 568-573.
422. Watanabe, M., Fujie, N., Sato, S., and Suzuki, K. Experimental studies on antigenic variation of Japanese B encephalitis virus. *Virus*, 1954, 4: 279.



423. Webb, J. K. G. and Pereira, S. M. Further studies in encephalitis in children in south India. *Ind. J. Child Health*, 1957, 6: 217-229. 18 cases.
424. ----- Encephalitis in North Arcot due to a virus similar to or identical with Japanese B. *Ind. J. Pediat.*, 1956, 23: 193-196.
425. ----- and Pereira, S. Clinical diagnosis of an arthropod-borne type of virus encephalitis in children of North Arcot District, Madras state, India. *Ind. J. M. Sc.*, 1956, 10: 573-581. 16 cases.
426. Work, T. H. Russian spring-summer virus in India: Kyasanur Forest disease. *Progr. M. Virol.*, N. Y., 1958, 1: 248-279. Clinical features; pathological findings; nature of virus and host responses in monkeys and in man; identification of the virus; epidemiology.
427. Work, T. H. Virological aspects of Kyasanur Forest disease. *J. Ind. M. Ass.*, 1958, 31: 111-113.
428. ----- and Trapido, H. Kyasanur Forest disease. A new virus disease in India. Summary of the preliminary report of investigations of the Virus Research Center on an epidemic disease affecting forest villagers and wild monkeys of Shimoga district, Mysore. *Ind. J. M. Sc.*, 1957, 11: 341-342.
429. ----- Murphy, N., Laxmana, R. R., Bhatt, P. N., and Kulkarni, K. G. Kyasanur Forest disease. III. A preliminary report on the nature of the infection and clinical manifestations in human beings. *Ind. J. M.*, 1957, 11: 619-645.
430. ----- Serological diagnosis of Japanese B type encephalitis in North Arcot district, Madras state, India, with epidemiological notes. *Ind. J. M. Sc.*, 1956, 10: 582-592.
431. World Jewish Medical Association, 4th meeting, Israel, August 1958. *J. Am. M. Ass.*, 1959, 169: 870-871. West Nile fever, p. 871.
432. Wu, A. J., Chu, H. H., Liu, F. T., and Ma, L. T. Improved acetone-ether extracted complement fixing antigen, for diagnosis of Japanese B virus encephalitis. *Chin. M. J.* 1954, 72: 215-220. A modification of Casals' extraction method.

433. Wu, C-J and Wu, S. Y. Study on the virus of Japanese B encephalitis. *Chin. M. J.*, 1956, 74: 409.

#### AUSTRALIA

434. Anderson, S. G. Murray Valley encephalitis and Australian X disease. *J. Hyg., Lond.*, 1954, 53: 447-468. Review of literature. The two diseases are identical.
435. ----- Murray Valley encephalitis; a survey of avian sera, 1951-1952. *Med. J. Australia*, 1953, 1: 573-576.
436. ----- Murray Valley encephalitis; the contrasting epidemiological picture in 1951 and 1952. *Med. J. Australia*, 1953, 1: 478-481.
437. Austin, F. J. A study of the haemagglutinen of the Nakayama strain of Japanese B encephalitis virus. *Austral. J. Exp. Biol.*, 1954, 32: 885-892.
438. Beech, M., Duxbury, A. E., and Warner, P. Murray Valley encephalitis antibodies in an aboriginal mission in South Australia; the application of the haemagglutination-inhibition test. *Austral. J. Exp. Biol.*, 1958, 36: 55-64.
439. ----- Howes, D. W., and Miles, J. A. R. Observations on serum from aborigines in the Northern Territory of Australia. II. Antibodies against Murray Valley encephalitis (X disease), psittacosis and "Q" fever. *Med. J. Australia*, 1953, 40: 776-778.
440. Fastier, L. B. Infectivity titrations of the viruses of western equine encephalomyelitis and Newcastle disease by tissue culture methods. *J. Immun.*, 1954, 72: 341-347.
441. French, E. L., Anderson, S. G., Price, A. V. G., and Rhodes, F. A. Isolation of Murray Valley encephalitis virus from the brain of a fatal case of encephalitis occurring in a Papuan native. *Am. J. Trop. M. Hyg.*, 1957, 6: 827-834.

442. Gunther, C. E. A preliminary report on a form of encephalitis in New Guinea. *Med. J. Australia*, 1955, 42: 715-717. MVE is probably endemic.
443. Ludford, C. G. and Cook, I. Murray Valley encephalitis; a survey of human and animal sera in Queensland. *Med. J. Australia*, 1957, 2: 319-324.
444. M. C. Encefalite di Murray Valley. *Clin. nuova, Roma*, 1953, 17: 445-456.
445. McLean, D. M., Hall, W., and Hall, E. Vectors of Murray Valley encephalitis. *J. Infect. Dis.*, 1957, 100: 223-227. *Culex annulirostris* is the principle vector.
446. ----- Serological group reactions of Murray Valley encephalitis virus. *Austral. J. Exp. Biol.*, 1956, 34: 71-75.
447. ----- and Stevenson, W. J. Serological studies on the relationship between the Australian X-disease and the virus of Murray Valley encephalitis. *Med. J. Australia*, 1954, 1: 636-638. 19 of 92 persons who had X-disease in 1917, tested in 1952, showed serum antibodies to MVE.
448. ----- Transmission of Murray Valley encephalitis virus by mosquitoes. *Austral. J. Exp. Biol.*, 1953, 31: 481-490.
449. Meadows, A. W. The psychological sequelae to Murray Valley encephalitis. *Med. J. Australia*, 1957, 2: 854-856.
450. Miles, J. A. R. and Dane, D. M. S. Further observations relating to Murray Valley encephalitis in the Northern Territory of Australia. *Med. J. Australia*, 1956, 1: 389-393.
451. ----- A note on the persistence and distribution of antibodies to Murray Valley encephalitis in man. *Med. J. Australia*, 1955, 1: 1-2. Serum antibodies present in 24 of 200 cases two and a half years after illness.



452. Miles, J. A. R. Infection of birds with Murray Valley encephalitis (X disease). Austral. J. Exp. Biol., 1954, 32: 69-78.
453. ----- and Howes, D. W. Observation on virus encephalitis in south Australia. Med. J. Australia, 1953, 1: 7-12.
454. Rowan, L. C. and O'Connor, J. L. Relationship between some coastal fauna and arthropod-borne fevers of north Queensland. Nature, 1957, 179: 786-787. 38 species of wild birds tested.
455. Warner, P., Beech, M., and Casley-Smith, J. R. Observations on serum antibodies in aborigines of the Northern Territory. Med. J. Australia, 1957, 2: 858-859.
456. ----- The detection of Murray Valley encephalitis antibodies in hens' eggs. Austral. J. Exp. Biol., 1957, 35: 327-333.
- 457.----- Murray Valley encephalitis; the distribution of human antibodies in the upper Murray region of South Australia in 1955. Med. J. Australia, 1957, 2: 818-821.



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